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A CLINICAL LECTURE.

Delivered at the Medical Department of the University of California.

By D. W. Montgomery, M. D., Professor of Pathology and Clinical Lecturer on Diseases of the Skin, in the Medical Department of the University.

Mrs. K——, married, æt. 30, born in America, dark complexion, thin, and not at all robust looking, has suffered frequently from "fits," which were very evidently hysterical. She has always lived in the United States, and has never been either in Mexico or in the Sandwich Islands.

She came to the clinic on account of a "patch" or "spot," as she calls it, on the outer side of the right thigh. This "spot" first attracted her attention about six weeks ago, and was then small and violet colored, and about the size of a five cent piece. This area grew by peripheral extension, and is now as large as a silver dollar; it is surrounded by a violet ring, and inside the ring the skin is smooth, glazed and slightly brownish in color. If the central area be looked at closely, you will not be able, even with a magnifying glass, to find any lanugo hairs, although in the violet ring, and in the surrounding healthy skin, it will be easy to see many of them. By passing the palm of the hand over the surface, or by pinching up the affected skin between the fingers, we are able to appreciate a deep thickening, which is evidently in the deeper layers of the skin, in fact, in the corium. In size, the affected area corresponds exactly with the affected area on the surface of the skin. A tingling sensation is the only discomfort she has had in the patch, and she came to the clinic because she thought it was some kind of ringworm, and was afraid of it spreading to other parts of the body.

We have here to do with a disease called morphœa, which is a rare affection, but not so rare as the text-books would lead us to suppose, for many cases are undoubtedly not diagnosed, and people having it, often pay no attention to it, because of the absence of subjective symptoms, such as pain, itching or other discomfort. It is also very interesting because of its connection with scleroderma and unilateral atrophy of the face; and because of the liability of confounding it with several other diseases. Its connection with scleroderma is evidently very close, for there is the same hardening and thickening of the true skin, the same smoothness and obliteration of the natural markings on the surface, and the same lack of subjective symptoms. The pathological changes in these two diseases are alike, consisting of a round celled infiltration and condensation of the true skin, with obliteration of the papillary layer. Both diseases may end in resolution without leaving a trace of their presence, or they may lead to atrophy and shrivelling of the true skin. In fact, the symptoms, course and pathology of the two diseases are so similar that many authors call morphœa circumscribed scleroderma. Almost all competent observers unite in attributing both these diseases to disturbance of the function of the trophic nerves. Both occur in people who are decidedly nervous, and groups of morphœa patches are very often arranged in the distribution of some nerve, frequently the supraorbital branch of the fifth pair. Morphœa patches have been observed associated with unilateral atrophy of the face, a disease of which only 89 cases have, up to the present, been recorded, which is characterized by atrophy of the skin, and deeper structures, muscles, connective tissue, and bones of one half of the face, and which is now known to be due to disease of the fifth nerve.

Although morphœa is rare, causes very little if any discomfort to the subject, and though we are able to do but little in modifying its course by therapeutic measures, still it is of the utmost importance for the welfare and comfort of patients, that one should be able to differentiate it from some affections which it may simulate. This patient had made a diagnosis of her own case; she called it ringworm, and its peripheral growth and ring shape excuses the error in a person not having a medical education; but such a mistake in diagnosis would cause a great deal of unnecessary and misdirected labor, and much anxiety, together with marked disappointment in the results of treatment. It is only necessary to draw attention to the liability of such an error to prevent its being made. But confounding morphœa with ringworm, has not nearly the same importance as mistaking it for one of the manifestations of leprosy. Leprosy is a disease which attacks, by preference, the nerves and the skin. It is not strange that when the bacilli of leprosy attack a nerve, that the skin in the area supplied by that nerve should undergo trophic disturbances resembling morphœa. Usually, in leprosy of the skin, the diagnosis can readily be cleared up by demonstrating the presence of the lepra bacillus, but in the morphœa-like patches of leprosy, no bacilli are present in the skin lesion, nor would we expect to find them, as these patches are only a symptom of leprous infection of the nerve supplying the area of affected skin. We can exclude leprosy in this case, however, because there is no anesthesia in the diseased area, there are no other manifestations of leprosy, and the patient never has lived in a country where leprosy is endemic; on the other hand, she is hysterical and nervous, just the kind of subject in whom we would expect to have morphœa.

The treatment in this case is directed entirely to the general condition. The patient is nervous, and run down in health. We have given her pills of iron and myrrh, and ordered salt baths, and attention to diet. As her general condition improves, we shall expect the morphœa to disappear.

A NOTE ON THE CIRCUMSTANCES UNDER WHICH WARM WEATHER DETERMINES THE PREVALENCE OF CHOLERA INFANTUM.

By DAWSON WILLIAMS, M. D. (Lond.), M. R. C. P. (Lond.), Assistant Physician to the Shadwell Children's Hospital, London; Member of the Council of the Sanitary Institute; Fellow of University College.

Dr. Benjamin Rush, who was the first to apply the term "cholera infantum" to the disease (or diseases) which we now know so well under that designation, observed, writing of Philadelphia, that "its frequency and danger are always in proportion to the heat of the summer." The general recognition of this etiological factor is also evidenced by the terms "cholera æstiva" (sometimes applied to the disease by medical writers) and "summer complaint" (by which it is known to the laity in some districts). Rush published his observations just one hundred years ago,[1] and very numerous have been the attempts during the century which has elapsed to trace the links in the chain of causation which must connect the two phenomena—a warm period and a high mortality from cholera infantum.

Statistics might easily be quoted to prove the general truth of the assertion. Dr. J. Lewis Smith has given[2] the deaths from diarrhea reported in 1882 to the Health Board of New York City of children under five years of age, as follows:

Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
34	32	50	50	72	231	1533	817	362	195	68	35

The statistics obtained by Dr. Ballard in Islington bear the same character, but have a value of their own inasmuch as they give particulars of all cases of severe diarrhea treated by the poor-law medical service of Islington during six years (1857–62). He divided the year into three periods: (1) The preëpidemic period, comprising the first twenty weeks of the year. (2) The epidemic period, comprising the second twenty weeks of the year. (3) The post-epidemic period, comprising the last twelve weeks.

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[1] Medical Inquiries and Observations. Philadelphia, 1789.

[2] Pepper's System of Medicine, Vol. II, p. 727.

TABLE I.

Showing the number of attacks in children under 1 year, observed in each month during a period of six years, at Islington.

Preëpidemic Period of 20 Weeks.		Epidemic Period of 20 Weeks.		Post-epidemic Period of 12 Weeks.	
Lunar Months of 4 Weeks.		Lunar Months of 4 Weeks.		Lunar Months of 4 Weeks.	
1st	15	6th	20	11th	43
2d	18	7th	109	12th	16
3d	20	8th	185	13th	20
4th	14	9th	129		
5th	16	10th	77		
Total	83	Total	520	Total	79

A curve platted from the number of attacks would have the same form as a curve platted from the number of deaths, although under the head of "diarrhea" attacks of very different clinical severity would be brought together.

The important question, from our present point of view, here arises, whether cholera infantum is epidemiologically different from the summar diarrhea of elder children and adults. Upon this and upon the relation of temperature to diarrhea very important evidence is to be obtained from a study of an interim report by Dr. Ballard[3], issued in May, 1889. The inquiry has extended over eight years, and is not complete; indeed, the report only gives detailed evidence on a few of the questions raised in the introductory note. Upon this point (as to whether the main etiological factors in the acute summer diarrhea of infants and of children and adults are the same) Dr. Ballard's evidence is all in favor of an affirmative answer. This is not, of course, a new proposition, but it has not before been so distinctly affirmed or so copiously supported by statistical evidence. It does not involve the assumption that all the etiological factors are identical, nor need it interfere with our conception of the disease as clinically distinct in certain respects. The maximum number, both of attacks and deaths, falls at about the same period of the year for all ages, from the earliest months of life to extreme old age; there can be noted only a slight tendency for the maximum in infancy to precede the maximum of late years by a few days or weeks; the same holds good, also, for the minimum. Dr. Ballard's Islington statistics for six years show that for ages under five years and over five years, respectively, the minimum and maximum incidence were both attained simultaneously by each, namely, in the first and eighth lunar months of the calendar year; and further, that the rates of attack at these two age-periods increased from minimum to maximum and declined again from maximum to minimum on exactly parallel lines. The subjoined table also illustrates the first point; it gives the week of the year in which the greatest number of cases occurred at the various ages, and at all ages, in Leicester, where diarrhea is very prevalent. It will be seen that the maximum, as a rule, falls in the same week for each age; 1884 is an exception, but in that year the epidemic underwent a recrudescence late on in August (33d to 34th week), and the attacks under 1 year of age, though they were from 46 to 64, did not reach so high (77) as at the earlier period.

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[3] The full title of this report is exceedingly cumbrous—"Seventeenth Annual Report of the Local Government Board, 1887-8; Supplement in Continuation of the Report of the Medical Officer for 1887; Diarrhea and Diphtheria. London: Printed for H. M. Stationery Office, * * and to be purchased, either directly or through any bookseller, from Eyre & Spottiswood (etc.). 1889. [C. — 5638.] Price, 8 shillings."

TABLE II.

Showing the week in the year during which the greatest number of cases occurred at the several ages. (For Leicester: Compiled from DR. BALLARD'S *Report, p. 58 et seq.*)

DATE.	Under One Year.	One Year to Five Years.	Five Years and upwards.	All Ages.
1881	30	30	32	32
1882	32	32	32	32
1883	35	35	35	35
1884	29	34	33	34
1885	30	30	30	30
1886	29	29	29	29
1887	28	28	28	28

One of the first writers to endeavor to give more precision to the statement that the amount and severity of diarrhea, in infants especially, was related to the heat of the summer, was Dr. Clark Miller. He arrived at the conclusion that the disease was a general disease and only produced when a high atmospheric tem-

TABLE III.—*Showing number of deaths in London from diarrhea in two consecutive years.*

1887—A WARM SUMMER.							1888—A COLD SUMMER.						
No. of Week	Week Ending.	Deaths from Diarrhea.			Range of Minimum Temperature of Air.	Mean Weekly Min. Temp. of Air.	No. of Week	Week Ending.	Deaths from Diarrhea.			Range of Minimum Temperature of Air.	Mean Weekly Min. Temp. of Air.
		0–1 Years.	1–5 Years.	All Ages.					0–1 Years.	1–5 Years.	All Ages.		
21	May 28	4	5	10	35.9 to 47.0	42.8	21	May 26	6	1	9	40.6 to 46.0	43.2
22	June 4	5	3	12	44.4 to 50.8	47.5	22	June 2	9	2	19	35.0 to 50.6	44.3
23	June 11	2	7	9	43.4 to 54.8	49.6	23	June 9	12	2	18	46.5 to 53.6	49.8
24	June 18	10	4	20	47.9 to 53.6	51.0	24	June 16	10	3	16	46.3 to 50.0	47.8
25	June 25	21	4	30	44.0 to 51.7	49.1	25	June 23	15	3	18	45.5 to 54.5	48.1
26	July 2	43	4	52	42.5 to 55.5	50.0	26	June 30	21	5	36	49.2 to 60.1	54.3
27	July 9	107	17	133	50.9 to 60.0	55.3	27	July 7	29	14	51	46.2 to 54.7	50.8
28	July 16	265	33	312	55.0 to 59.2	57.2	28	July 14	60	7	72	42.8 to 55.1	48.2
29	July 23	389	73	483	44.8 to 57.4	49.7	29	July 21	46	7	62	48.6 to 55.1	52.8
30	July 30	435	59	517	51.7 to 58.9	55.5	30	July 28	68	15	89	49.2 to 56.1	53.8
31	Aug. 6	354	60	436	46.3 to 54.1	49.7	31	Aug. 4	105	11	121	45.8 to 53.0	50.4
32	Aug. 13	330	55	412	50.8 to 57.4	54.3	32	Aug. 11	104	26	138	47.1 to 59.0	54.3
33	Aug. 20	259	40	316	41.0 to 53.3	48.5	33	Aug. 18	128	24	162	45.2 to 55.5	48.6
34	Aug. 27	148	25	191	45.9 to 60.1	51.2	34	Aug. 25	138	42	192	45.7 to 54.5	51.8
35	Sept. 3	97	23	132	51.8 to 58.9	55.9	35	Sept. 1	112	24	144	41.5 to 52.3	48.4
36	Sept. 10	72	15	107	40.7 to 54.5	48.9	36	Sept. 8	96	29	131	45.0 to 57.0	51.2
37	Sept. 17	55	8	73	43.1 to 52.2	47.4	37	Sept. 15	87	26	122	41.4 to 53.0	44.7
38	Sept. 24	33	5	45	43.3 to 50.1	47.0	38	Sept. 22	60	15	78	47.1 to 54.3	50.0
39	Oct. 1	27	9	43	33.6 to 47.7	40.9	39	Sept. 29	61	13	77	45.6 to 55.4	49.9
40	Oct. 8	10	5	18	43.8 to 49.0	47.5	40	Oct. 6	52	15	72	29.7 to 38.5	33.5
41	Oct. 15	13	3	24	25.3 to 46.3	35.0	41	Oct. 13	31	8	43	27.9 to 42.1	36.2
42	Oct. 22	4	2	11	26.8 to 38.5	35.0	42	Oct. 20	24	10	42	31.4 to 39.7	34.4
		2,686	459	3,386					1,274	302	1,712		

perature prevailed for some time. Dr. A. Siebert read an interesting paper before the New York Academy of Medicine in February, 1888,[4] in which he expressed the opinion that the important element was the minimum temperature. "Warm weather," he wrote, "(either dry or moist) showing a minimum daily temperature of not less than 60° F. brings on the epidemic appearance of cholera infantum, invariably in every year." Dr. Clark Miller had spoken of an atmospheric temperature of 72° F., but this is manifestly too high or the disease would be practically unknown in Great Britain, whereas Dr. Buchanan writes[5]: "For children it is habitually the most fatal of all the so-called 'zymotic diseases,' not exceping scarlatina, measles or whooping cough. For children, indeed, diarrhea is the most frequently registered cause of death out of all designated causes of death, with the two exceptions of 'convulsions' and 'bronchitis.' In the average of years its mortality to children under five is as much as one-tenth part of all other causes put together."

I have attempted to elucidate this question further by drawing up tables for 1887 and 1888,[6] showing the deaths from diarrhea in London during the weeks from the twenty-first to the forty-second, both inclusive. The deaths under one year and between one and five years of age are set out; the highest and lowest minimum temperature for each week are given, as well as the mean minimum temperature of the air.

I have chosen these two years, because the summer of 1887 was exceptionally warm and dry, and that of 1888 as exceptionally cold and wet. The tables bring out two points: In the first place they showed the effect of a warm summer in producing a relatively large number of deaths from diarrhea, and it is of special interest to note that this effect operated especially on infants, for there were more than twice as many deaths of infants under one year in 1887 as in 1888. The numbers placed together for comparison are:

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[4] New York Medical Record; Vol. I, 1888; p. 317.

[5] Seventeenth Annual Report of the Local Government Board, before cited.

[6] Table III, page 526.

	Deaths from Diarrhea.		
	Under 1 Year.	1 to 5 Years.	All Ages.
Warm dry summer	2686	459	3386
Cold wet summer	1274	302	1712

The table further shows that, in London at least, a much lower minimum temperature than 60° F. brings on the epidemic; or, as I would prefer to say, the endemic prevalence of diarrhea. Many writers appear disposed to explain the influence of warm weather by saying that a continuous warm temperature favors decomposition of milk, which reaches city children only after many hours of traveling. The existence of this danger will be generally admitted, and it is a fact that diarrhea, in the early stage, may sometimes be stopped by substituting tinned ("Swiss") milk for the "cow's milk" of the milkman. It is better treatment to stop milk diet altogether. Moreover the use of tinned milk is very desirable, being a complete protection. Further, if the disease were directly due to ptomaines generated by decomposition of the milk, would not the curves of morbidity and mortality follow the temperature curve more closely?

Without laying too much stress on arguments of this class, I wish to point to a hypothesis which has arisen out of some observations first made by Dr. Henry Tomkins, Medical Officer of Health for Leicester, and since carried on in other boroughs. All observers have recognized that the maximum, and even the mean, atmospheric temperature was not a satisfactory measure of the "warmth" or "heat" of the weather. Dr. Siebert, therefore, took the minimum temperature, and Dr. Miller spoke of recognizing the importance of the fact that the effect of the sun on the earth was "cumulative." Impressed with the same idea, the health authorities ordered the corporation of Leicester to take the *earth temperature* systematically. This is a far more stable factor than the atmospheric temperature, and is an exact measure of the amount of heat reaching a district. When the heat has penetrated a few feet into the ground it will be retained for a relatively long time, and will to a large extent determine the minimum temperature of the air in and around houses. Dr. Tomkins came to the conclusion that "soon after the temperature of the earth, at a depth of one foot, has reached 59° to

62° F., the causes producing the disease begin to operate." Dr. Ballard, drawing his conclusions from a large number of observations made in various towns, prefers to take the temperature of the earth at a depth of 4 feet as a gauge. "The summer rise of diarrheal mortality," he writes, "does not commence until the mean temperature recorded by the 4-foot earth thermometer has attained somewhere about 56° F., no matter what may have been the temperature previously attained by the atmosphere or recorded by the 1-foot earth thermometer." He further states that diarrhea usually attains its maximum mortality in the same week as the temperature of the earth at a depth of 4 feet attains its mean weekly maximum. The data from which these conclusions are drawn are unfortunately not given, and it is only possible to test them by a comparison with the figures given by Dr. Tomkins (See Table IV), which only partially bear them

TABLE IV.

Compiled from Dr. Tomkins' Report on Leicester, showing the number of deaths from Diarrhea, the range of the 4-foot earth thermometer, and the range of the mean and maximum atmospheric temperature for eighteen weeks from the commencement of the annual epidemic to after its ending, for 1887.

Week Ending—	No. of Deaths.	Range of Earth Temperature at 4 feet.	Daily Range of Atmospheric Temperature.	
			MEAN.	MAXIMUM.
July 2	3	54.0 to 56.6	55.8 to 68.9	68.2 to 80.6
" 9	24	55.8 to 56.9	57.0 to 70.7	67.1 to 84.0
" 16	34	57.0 to 58.0	63.3 to 71.3	69.6 to 79.5
" 23	39	58.0 to 60.0	55.8 to 66.7	65.2 to 79 8
" 30	31	58.5 to 59.0	62.4 to 65.7	71.5 to 76.0
Aug. 6	31	59.0	58.5 to 69.2	71.0 to 84.0
" 13	23	59.0 to 59.5	55.0 to 65.2	57.4 to 80.0
" 20	11	58.8 to 59.6	54.2 to 59.9	60.4 to 70-7
" 27	11	58.2 to 58.7	58.2 to 66.3	69.0 to 81.3
Sept. 3	7	58.5 to 58.9	54.0 to 64.7	65.8 to 77.0
" 10	10	58.0 to 58.6	53.7 to 60.9	58.6 to 67.1
" 17	4	57.0 to 57.8	49.7 to 55.2	54.4 to 63.2
" 24	2	56.8 to 56.2	50.1 to 54.2	53.2 to 63.0
Oct. 1	2	55.1 to 56.2	41.1 to 55.1	54.3 to 62.6
" 8	0	54.1 to 54.8	48.0 to 53.5	52.2 to 58.5
" 15	3	52.8 to 54.0	37.8 to 46.3	47.0 to 49.8
" 22	1	51.2 to 52.5	27.8 to 47.6	48.3 to 57.0
" 29	0	49.5 to 50.8	36.3 to 51.0	43.5 to 56.4

out; his tables,[1] however, show very clearly that the earth temperature at 4 feet fluctuates very slowly; it rises slowly and falls slowly. This last fact deserves special attention, as it may serve to explain the tailing off of the epidemic not coincidently with the setting in of cool weather, but somewhat later.

If this theory, that the diarrhea curve has the same form as the curve of earth temperature, turns out to be generally applicable, it would seem to mark a real advance in our knowledge of this and possibly of kindred diseases; and the further question arises whether the air contained in the earth, which must find its way frequently into the basements of houses owing to barometric movements and fluctuations in the amount of ground water, may not be the ultimate fact of greatest etiological importance.

REPORTS FROM THE HOSPITALS AND ASYLUMS OF THE PACIFIC COAST.

CITY AND COUNTY HOSPITAL.

San Francisco, Cal.

UNDER THE CARE OF DR. J. F. MORSE.

[Reported by T. L. MAHONEY, M. D.]

Repeated Re-amputations for Painful Stump.

E. S——, æt. 63, sailor, admitted to hospital November 24, 1888, suffering from a painful stump of the left leg, the lower part of which had been amputated on May 28, 1888, for an injury received by an explosion. On November 30, 1888, a secondary amputation was made by Dr. Morse, four inches below the knee. Under antiseptic treatment the parts healed nicely, but the pain still remained unaltered. December 24, 1888, an amputation was made at the middle of the thigh by Prof. Douglass, several days after which an erysipelatous flush appeared along the outer aspect of the thigh. The part was painted with tincture of iodine, and the patient put on ten minim doses of tincture of chloride of iron. January 14, 1889, an examination revealed fluctuation in the part previously occupied by the erysipelatous flush. An incision was made and the pus evacuated. The stump still remained painful, and from it there was a constant discharge of pus until April 14, 1889, when the flaps were opened and revealed caries of the bone, two inches of which were removed, after which the wound healed, the pain remaining as severe as before. June 17, 1889, at the request of the patient an amputation was made at the hip joint. In the afternoon slight hemorrhage occurred, but was easily checked by the application of ice and elevation of the pelvis. The flap healed well, in spite of the patient's tearing away the bandages and removing the drainage tubes while delirious. July 23, 1889, patient able to leave bed and walk about on crutches, the pain being greatly diminished. July 27th. patient was sent to the Almshouse, with a moderate discharge of pus from the openings left by drainage tubes. He was then complaining of no pain in stump, and was able to get about on crutches.

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[1] "A Report upon some Observations made in Leicester relating to the prevalence of Summer Diarrhea in that Borough." By Henry Tomkins, M. D., B. Sc., etc.

Abscess of the Mastoid Cells Following Otitis Media.

A. R——, was admitted to Ward E of the hospital March 30, 1888, suffering from an acute otitis media, for which he was treated. After being in the ward for a short time there occurred a rupture of the drumhead of the left ear, following which was a free discharge of pus. In a few days the tissue behind the left ear became greatly swollen, pushing the ear forward, and the least pressure over the mastoid process gave rise to most excruiating pain. The patient's temperature rose, he became delirious and was unable to sleep. An incision was made through the soft parts, but the symptoms remained unaltered. The patient was then transferred to the surgical ward, where the former incision was enlarged and an opening chiseled into the mastoid cells, through which a quantity of pus escaped, the symptoms disappearing almost immediately. The wound was packed with iodoform gauze to keep the parts from healing, and the opening into the mastoid washed antiseptically, daily. In several weeks the parts were allowed to close, when, some of the symptoms returning, the operation was repeated, and followed by a rapid recovery.

Gastrotomy for Carcinoma of the Esophagus.

W. K——, æt. 50. Patient has always been healthy up to present illness, which commenced in March, 1888, with difficulty in swallowing, and pain in chest and right arm. When patient swallows anything it is immediately vomited. He has been losing weight, and is troubled with a chronic cough. Physical examination reveals dullness of the apices of both lungs, and bronchial breathing. On passing a sound into the esophagus an obstacle is met with. On July 15, 1889, at the request of Dr. Abrams, the patient was transferred to the surgical ward for the operation of gastrotomy. An incision two inches in length was made along the free margin of the ribs on the left side, the stomach secured, and its serous coat stitched to the edges of the wound. During the operation the patient was so weak that the anesthetic was sparingly administered, and the patient constantly stimulated by hypodermic injections of whisky and ammonia. After the operation the patient gradually failed, in spite of continual stimulation, until the evening of the 16th of July, when he died from exhaustion. July 17th, an autopsy revealed a carcinoma of the esophagus just above the cardiac orifice of the stomach, entirely obliterating the lower end of the esophagus. The stomach was found to be neatly adherent to the edges of the incision, and there was no sign of peritonitis.

Amputation of Shoulder Joint for Gangrene, following Gunshot Wound of Forearm.

J. S——, colored, was admitted to hospital November 24, 1888, suffering from the effects of a gunshot wound of the right forearm, near the wrist joint. Incisions were made by Prof. Douglass to ascertain the position of the bullet, but it could not be located, although a large quantity of pus was evacuated. The patient's temperature was high on entering the hospital, and remained so until November 28, 1888, when more incisions were made in the arm and forearm, in which a phlegmonous inflammation had developed. The patient's condition improved for a time, but eventually the man's forearm became gangrenous, and an amputation at the shoulder joint was made by Dr. Morse. Careful dissection of the amputated member revealed a comminution of the bones of the forearm, together with a destruction of the ulnar and radial arteries. The bullet was found imbedded deeply between the two bones of the forearm, in close proximity to the elbow joint. The patient improved rapidly for a time, when suddenly his temperature ran up to 103° F., and examination revealed deep seated fluctuation at the seat of operation. Several incisions were made, and followed by the free escape of pus. From this time the parts took on a healthy appearance and the secondary incisions rapidly healed, the patient leaving the hospital April 24, 1889, with flaps entirely healed.

SOUTHERN PACIFIC COMPANY'S HOSPITAL,

Sacramento, Cal.

UNDER THE CARE OF T. W. HUNTINGTON, M. D.

[Reported by GEO. B. SOMERS, M. D.]

Reamputation after Syme's Operation.

T. M——, engineer, æt. 50. On Christmas morning, 1880, patient's left foot was crushed in a collision occurring on the line in Utah. He was carried to Ogden, and a prominent surgeon, from Salt Lake City, amputated the foot at the ankle joint. The patient was then forwarded to the Company's Hospital at Sacramento, and entered on Jan. 8, 1881. The flaps did not heal kindly, and convalescence was long and tedious. On being discharged the patient procured an artificial limb, and followed his occupation for eight years, up to the present time. During the last year or so, however, he has had more or less trouble with the stump. Any extra exertion, or sudden jar of the leg, would cause the cicatrix to become inflamed. Finally, a chronic state of inflammation set in, and the patient was compelled to enter the Hospital for relief. Examination showed the extremity covered with a hard, keloid growth, which was of a dusky red color, and painful to the touch. A sinus was found leading to the bone, from which there was a slight discharge. Patient was advised to have the leg amputated at the junction of the lower and middle thirds. On February 22d the operation was performed by Dr. Huntington, and eight inches of the stump removed. The flaps healed rapidly, under antiseptic dressings, and two months later the patient was able to resume his occupation, wearing a new artificial limb. On dissecting the amputated stump, it was found that neither of the malleoli had been removed in the primary operation. The space between the projecting ends of the bones was filled with hard keloid tissue, which was partially infiltrated with calcareous salts. The articular end of the tibia showed incipient necrosis.

Remarks by Dr. Huntington: This is another of those cases that have served to cast disrepute on Syme's amputation. Prof. Stephen Smith, who was the second to perform the operation in America, states, from a collection of a number of cases, that the necessity for reamputation is 3 per cent. greater than in any other. The "Medical and Surgical History of the War," gives a record of 83 cases of Syme's amputation. In 20 cases, or about 24 per cent., reamputation was necessary. The fault, however, can generally be traced to some detail of the operation. The most frequent cause of bad results is making the plantar flap too short. Wyeth made a number of dissections in order to study the vascular supply of the region about the ankle joint. He found that the vessels which supply the integument about the heel are given off from the external plantar artery, and consequently run backward. If, therefore, the plantar flap be made too short, it will either cut across these vessels, or cut the posterior tibial, before it bifurcates into the plantar arteries. In the foregoing case there is no record of the length of the flaps, but the stump showed poor vascular supply, and the position of the cicatrix seemed to indicate that the plantar flap had been made too short.

DEPARTMENTS.

OBSTETRICS, GYNECOLOGY AND PEDIATRICS.

By WALLACE A. BRIGGS, M. D., Sacramento, Cal.

The Sex of Infants.—DUPUY has conducted some very interesting researches as to the prediction of the sex of infants. Statistics of more than 200 families enable him to predict the sex of subsequent children if that of the first be communicated to him. He has discovered that the sex alternates with the menstrual period. Thus, if a male child is conceived in a menstrual period which may be designated by 1, every child conceived in the odd periods will be male, and in the even periods will be female. With these data it will be easy to determine the sex of children as may be desired. Dupuy adds that this rule holds of the offspring of the same couple only. If either parent changes a new series begins.

Alexander's Operation.—ZAYAITZKY has collated 244 cases of this operation, of which twelve were his own. There were two deaths, one of them occurring in Lawson Tait's practice, thirteen months after the operation. Of the author's own cases six were of descent with retroflexion, two of simple retroflexion, two of incomplete prolapse with retroflexion, one of incomplete senile prolapse, and one of incomplete anteversion. In every case the uterus has preserved its new position. Twice the author had difficulty in isolating the ligament and was able to complete the operation on one side only, and yet with perfect results. He presents the following conclusions: (1) Alexander's operation does not imperil life. (2) The *technique* of the operation is easy, but novices should study on the cadaver. (3) Considering the favorable results obtained by the majority of those who have done this operation, it deserves to be employed wherever it is indicated, especially since in case of failure it does not derange the health or hinder the application of other procedures. (4) Alexander's operation corrects backward displacements of the uterus more rapidly and more durably than pessaries, massage and electricity. (5) In case, of uterine prolapse, complicated by rupture of the perineum or hypertrophy of the vaginal portion, the operation should be preceded by amputation of the cervix or colpoperineorrhaphy. (6) The *technique* of Alexander Slawiansky is the best. (7) Complete success may be counted on even if only one ligament be shortened. (8) Search for the ligament at the internal ring with opening of the entire canal should be discountenanced because predisposing to hernia. (9) Casati's method is rational, the ligament, in case of adhesion, being retained more firmly than if it were sutured in the closed canal, as in Alexander's method. (10) It is not necessary to keep the patient for three weeks after the operation on the back with the thighs flexed; one week on the back, with limbs extended, is sufficient. (11) The pessary is useless in the post-operatory period and endangers the results of the operation. (12) The pessary is useful for a month after getting up to promote involution and to fortify the ligaments. (13) Pregnancy, after shortening of the ligaments, proceeds normallv. (14) Ventrofixation of the uterus by laparotomy is undoubtedly a dangerous operation, as is exploratory laparotomy also; it cannot supersede Alexander's operation, except when adhesions of the retroflexed uterus cannot be broken up in any other way and the condition is very grave.—*Rêvue de Medicine—Gazette de Gynêcologie*, June, 1889.

Corrosive Sublimate and Creolin in Obstetric Practice.—DR. GARRIGUES offers the following conclusions: (1) The solution of bichloride of mercury, used for vaginal and intrauterine injections, should not be stronger that 1:5000. (2) No more than two to three pints should be used. (3) The fluid should be removed from the uterus and vagina. (4) No injection should be used in normal cases after the birth of the child. (5) Intrauterine injections should not be given oftener than once or twice in twenty-four hours; vaginal, every three hours. (6) The symptoms and signs of absorption should be constantly looked for and the use of the bichloride discontinued at their first appearance. (7) The injections should not be used with patients suffering from anemia, abortion, kidney disease or diarrhea. (8) It is safest to abstain from mercurial injections altogether, until experience shows that the corrosive sublimate gives better results than any other antiseptic. (9) Corrosive sublimate should be used for disinfection of the outer surface of the patient, for the hands of doctors and nurses, and for material brought in contact with the patient. (10) Carbolic acid is, perhaps, as dangerous in injections as corrosive sublimate. (11) Other less effective germicides may occasionally answer a good purpose. (12) Creolin is an excellent antiseptic, little poisonous, a powerful hemostatic and makes all surfaces slippery—properties that recommend it, especially in obstetric practice.—*American Journal of Medical Sciences*, August, 1889.

The Management of Incomplete Abortions.—DR. CARPENTER describes Martin's method as follows: The patient is first anesthetized, then placed on the back, with the hips drawn well forward to the edge of the table or bed; the vagina is next well cleansed with bichloride 1:2000; two lateral retractors are also introduced, and held in place by assistants; the cervix is next seized by a lock-handle volsellum and drawn gently down; a steel or hard rubber dilator is then introduced, and the uterine canal dilated sufficiently to admit a large-sized, dull curette; a uterine irrigator, attached to an ordinary fountain syringe, is made use of for washing out the uterus, and is alternated with the curette. The washing and curetting are carried on until by the sense of touch we feel the uterine canal to have been cleared of all placental *débris*, and then a half drachm of tincture of iodine is injected into the canal by means of a Braun syringe, the nozzle being carried well into the fundus, and should be slowly withdrawn, while the liquid is gently forced from the syringe. The patient is now put to bed, and unless pain is severe no anodyne is given. Ten grains of antipyrine should be given night and morning for a day or two. From his experience, Dr. Carpenter draws the following conclusions: (*a*) Women suffering from incomplete abortions should not be put to bed and let alone. (*b*) Women so treated are exposed to the dangers of sudden hemorrhage and septicemia. (*c*) Women so treated are liable to protracted convalescence, and are not infrequently completely invalided. (*d*) By Martin's method the cases quickly convalesce, and the operation itself is almost entirely free from danger. (*e*) Antipyrine will do more in the after-treatment than any other remedy with which I am acquainted. Opiates act unfavorably, by checking secretion. (*f*) As to the merits of the two plans, *expectant* and *operative*, the latter is so superior as not to admit of comparison. Ten women die under the former to one under the latter.—*Cleveland Medical Gazette*, August, 1889.

Creolin in Obstetrics and Gynecology.—In obstetrics and in certain diseases of women, DR. PARVIN has, for several months, used creolin to the exclusion of other antiseptics. Applied by means of a cotton-wrapped applicator, after thorough cleansing of the cervical canal, it has proved useful in catarrh of the cervix. Care must be taken to protect the vagina, otherwise unnecessary suffering may be produced. Ordinarily, the application should be made once in three days. In these cases, especially if there be vaginal catarrh, injections of creolin solutions, 1:125, are of value. Creolin and benzoated lard, 4:100, forms an excellent antiseptic ointment. To support the uterus with cotton-packing, proceed as follows: Take a strip of prepared cotton, varying in width and length with the capacity of the vagina, on the average, perhaps, two inches wide and ten or twelve long, and with a spatula smear both sides with the creolin ointment. Having replaced the uterus and retracted the perineum, the physician seizes one end of the cotton strip with the dressing forceps and carries it up to the vaginal vault, in front of the cervix. He now carries a fold of the cotton behind the cervix, and again in front, and thus with alternate folds, backward and forward, until the canal is packed, either partially or completely, as the special case requires. This packing is firmer than one with separate pieces of cotton, and its removal is easier. It may remain in some cases even six days without producing an offensive odor. In obstetrics creolin may be employed for all the purposes for which carbolic acid and corrosive sublimate have been recommended.—*Practice*, July 20, 1889.

SURGERY.

By T. W. HUNTINGTON, B. A., M. D., Surgeon Southern Pacific Company's Hospital, Sacramento, Cal., and

J. F. MORSE, M. D., Professor of Clinical Surgery, Cooper Medical College, Surgeon German Hospital, San Francisco, Cal.

Arthrectomy of the Ankle Joint, with Temporary Extirpation of the Astragulus.—When a resection of the ankle joint is made, it is necessary, in order to remove all that is diseased, to take away the astragulus; otherwise, it is not possible to thoroughly inspect the under surface of the tibia, and more especially the fold of the capsule, which lies between this bone and the fibula; in addition to this, it often occurs that tuberculosis of the joint between the astragulus and the tibia is accompanied by a similar affection of the joint between the astragulus and the tarsus, whether there be a tuberculous centre in the astragulus or not. In consequence of this condition, Prof. Iversen determined to remove the astragulus in a number of these resections, using for this purpose the anterior circular incision, extending through all the extensor tendons, the foot being then turned under and the astragulus and the tuberculous granulations extirpated. The result was good, the tibia becoming fixed to the upper surface of the calcaneus. A slight spring in the joint of Chopart helps to assist in the movement of the foot in walking, and by means of the cicatrix, movement of the toes is obtained. Iversen found that in many of the cases in which he had removed the astragulus, that the bone was perfectly healthy, and the principle of only removing that which is diseased did not seem to harmonize with the procedure. It occurred to him that it might be possible to save the astragulus. He decided that the operation would have to be made bloodless, and that the elastic band (Esmarch's) should be removed after the dressing had been applied, so that the extirpated and returned astragulus might receive its nutrition from the blood which would flow into the wound. Of course, the operation must be carried out under strictest antiseptic precautions, and the extirpated astragulus kept in a 6 per cent. chloride of sodium solution until the time for again placing it in its position. This operation was performed Jan. 11th on a boy seven years old. The first dressing was removed twenty-one days after the operation and the wound found healed. On the 16th of February, there was a slight pain in the wound and a small quantity of matter escaped from the inner angle. The opening was enlarged and the astragulus found exposed. It was thoroughly scraped and found to be living, as a quantity of blood flowed from the wound made in it by the curette. Subsequently a number of fistulous openings appeared, and it became necessary to cut down and remove the astragulus. On examination, it was found to be tuberculous on its surface, but its centre was entirely free. Prof. Iversen draws the following conclusions: The operation did not succeed, so far as the retention of the talus in its place is concerned, but its removal was not necessitated by a necrosis, but by a relapse of the disease in the capsule, which extended secondarily to the under surface of the astragulus. It is, however, proven that it is possible to remove the bone, keep it outside of the body for half an hour, and replacing it, in time it grows again in its position.—DR. K. POULSEN, in *Centralblatt f. Chirurgie*, No. 31, 1889.

Treatment of Infectious Osteo-myelitis and Periostitis.—With an increased knowledge of the etiology and pathology of this disease, our treatment has been radically improved, and we have now scarcely in the whole range of surgery a disease more amenable to treatment, or favorable in its prognosis, if prompt and energetic measures be taken, or more fatal if they be neglected. Inflammation of bone tissue may be treated like that of soft tissue. By early incision, and, if necessary, trephining of the bone, with removal of the inflamed marrow, we may abort the inflammation and prevent necrosis and pyemia. The periosteum may become reattached and the vitality of the bone does not suffer by the thorough removal of the marrow. Diagnosis established, it is impossible to operate too early, thus anticipating suppuration. The acute septic fever, with high temperature and intense pain in a bone, points to an acute osteo-myelitis, and demands incision as the first measure. If the periosteum is found attached with subperiosteal effusion or suppuration, we may stop here. If the periosteum is healthy, or slightly edematous, possibly with oil globules, trephining of the bone and removal of the marrow becomes necessary.—HERMAN MYNTER, M. D., in *Annals of Surgery*.

Ligature of Arteries—Ether versus Chloroform.—"Detail in Surgery" is the text of the address in surgery by T. PRIDGIN TEALE, read before the recent meeting of the British Medical Association. Among the many valuable suggestions made by the author, the following are selected as of special interest:

In dealing recently with a wound of the brachial at the bend of the elbow, I was, of course, obliged to apply a ligature on both sides of the puncture, thus leaving exposed to view about half an inch of the artery containing the slit. It occurred to me to divide the artery between the ligatures, and so to relieve obvious tension. I then appreciated what I had never before fully realized in connection with ligature of an artery—the immense elasticity of the arterial coats. The separated ends receded fully half an inch from one another. The question at once occurred to me, can it be right ever to tie an artery by a single ligature, and to leave this force of elasticity to work for ulceration of the coats and gaping of the ulcer, with risk of final disturbance by retraction of the divided ends when ulceration has completed its work? This principle, proposed by Abernethy, and afterwards forgotten, has recently been revived at St. Bartholomew's Hospital by Mr. Walsham.

On the subject of Ether versus Chloroform, I wish to speak with a sense of grave responsibility—the more so, that I have to express views which are strongly opposed to those uttered at Glasgow last year by my predecessor. My reasons for venturing to differ so widely from one whose experience is not less than my own, and may be more, are as follows:

For the first fifteen years of my surgical life, I knew little of any anesthetic but chloroform. So far, probably, our experience runs parallel. During the last fifteen years, ether has almost superseded chloroform in my practice. Here the parallel ceases. Sir George MacLeod's second fifteen years are still devoted to chloroform. He cannot speak from fifteen years' experience of ether. As a result of the comparison of these two periods, I unhesitatingly assert that ether is, for safety to the patient and for comfort and convenience to the operator, immeasurably the better anesthetic of the two. Ether can be given *tuto cito et jucunde.* I say can be; would that I could say *is* always so given.

After commenting at some length upon the imperfect apparatus often employed in the administration of ether, and heartily endorsing the inhalers of Ormsby and Clover, the author states: There is another side of the ether question which I have never seen adequately stated. The advantages to the operator of using ether instead of chloroform are very great. In the first place, his anxiety is less, his fear of a fatal issue is less, and when obliged to trust to an inexperienced administrator, as he must do at times in sudden emergencies, he can more effectually keep an eye on the patient's condition and superintend the administrator, than when chloroform is used. In the second place, there is a saving of time, a patient being brought under the influence of ether in two or three minutes, whereas chloroform, in my experience, needs eight or ten. In the third place, under ether, return to consciousness of pain generally lags behind the return of mental perception, and thus anesthesia can easily be reëstablished without interrupting the operation. Let anyone who is not yet a convert to ether, or who having used ether, is wavering in his alliance to it, ask himself these questions: Have I myself studied the details of successful etherization? Am I using the best form of inhaler? Have I taken pains to have those who act for me, properly taught and trained? If not, let him ask himself one more question: Have I done my duty.—*British Medical Journal.*

On the Healing of Aseptic Bone Cavities by Implantation of Antiseptic Decalcified Bone.—To a most exhaustive and interesting paper upon the above subject, DR. SENN appends the following conclusions: (1) Antiseptic decalcified bone is the best substitute for living bone grafts in the restoration of a loss of substance in bone. (2) In the treatment of bone cavities, antiseptic decalcified bone is preferable to Schede's blood-clot, as it is not only a perfect aseptic, but at the same time a strongly antiseptic substance. (3) Implantation of a disc or plate of antiseptic decalcified bone into a cranial defect may be relied upon as a hemostatic measure in arresting bleeding from the vessels of the diploë; it constitutes a good temporary substitute for the lost portion of the cranium; it prevents the direct union of the brain or its envelopes with the pericranium, and, finally, it furnishes the most favorable condition for the production of new bone from the margins and the closure of the remaining defect by a firm and unyielding membrane. (4) Packing of an antiseptic bone cavity with chips of antiseptic decalcified bone, guards against unnecessary loss of blood, and exerts a potent influence in the prevention of infection by pus microbes that might have remained upon the surface of the wound or in the tissues. (5) Capillary drainage by an absorbable drain should be established after implantation for the purpose of preventing the accumulation of more blood in the wound than is necessary to form a temporary cement between the bone chips and between the contents of the cavity and surrounding tissues. (6) In the treatment of an aseptic bone cavity by this method, the packing answers the purpose of a tampon and furnishes the best medium for the growth and development of tissue. (7) Secondary implantation can be successfully practised in the treatment of a suppurating bone cavity after suppuration has ceased, and the cavity can be transformed into the same favorable conditions for healing as an aseptic wound.—*American Journal of Medical Sciences.*

OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

By Wm. Ellery Briggs, M.D., Sacramento, Cal.

Treatment of Laryngeal Phthisis.—In a recent address Dr. Keimer gave a *résumé* of the therapeutics of tubercular laryngitis and especially in regard to the results of a few methods of treatment. He had had favorable results from injections of menthol in delicate and irritable people where there was a moderate degree of ulceration. However, in most cases he has found the energetic use of lactic acid, and latterly, combining this treatment with curetting, most useful. Each application should be preceded by local anesthesia with a ten to twenty per cent. solution of cocaine. The treatment should be used every day, or every two or three days, according to the degree of reaction produced. He reported several illustrative cases, in two of which no pulmonary trouble could be discovered, and these, after long continued treatment, terminated in perfect recovery.—*Deutsche med. Wochenschr—Centralblatt f. klin. Medicin*, July 20, 1889.

Tracheotomy in Tuberculous Laryngitis.—In studying the literature of this subject Dr. O. Seifert has ascertained that many authors ignore the operation altogether or find few indications for its performance, while others place much importance upon it. He reports four cases operated upon by himself and Hoffa, in which the operation, undertaken only with a view of prolonging life, while it did not avert death, produced a marked relief to the symptoms of difficult breathing and painful deglutition. From these observations and the experience of other operators he concludes: (1) That an improvement and an occasional cure may take place from the operation. (2) That the patient's life may not only be prolonged, but, especially, it may be less distressing. (3) The presence of pulmonary tuberculosis is not a contraindication for the operation. (4) That the operation is not especially dangerous to a tubercular patient.—*Münchener med. Wochenschr—Centralblatt f. Chirurgie*, July 20, 1889.

Extirpation of the Lachrymal Gland in Incurable Lachrymation in Granular Lids.—M. Truc has drawn the following conclusions from a somewhat extensive experience. (1) In certain cases the incessant lachrymation and granular ophthalmia are so intimately dependent upon each other that the granulations cannot be cured without extirpation of the lachrymal glands. (2) The operation immediately checks the epiphora and rapidly ameliorates the granular ophthalmia. (3) The extirpation of the lachrymal gland is advantageous in constant lachrymation and is especially indicated in graular ophthalmia and in old and persistent stenosis of the lachrymal passages.—*Archives d'Ophthalmologie—France Médicale*, August 13, 1889.

Experimental Studies of Intra-ocular Injections.—M. NUEL has made researches upon the influence of intra-ocular injections on the epithelial linings of the anterior chamber. Injections of water cause the epithilial cells of the membrane of Descemet to become detached in from 15 to 30 seconds; they fall and are absorbed. Injections of mercurial solutions caused the same effect in ten seconds. Solutions of chloride of sodium did not produce these changes. It has been demonstrated that intra-ocular injections are not destructive to the microbes contained in these fluids, but may be very injurious to the tissues of the eye. One should, therefore, employ intra-ocular injections only for the mechanical effect as for the elimination of lens substance. A boiled solution of chloride of sodium is preferable for this purpose.

In the discussion M. CHEVALLEREAU said that he had made a great number of intra-ocular injections after cataract operations without the slightest inconvenience. He had not, however, used antiseptic solutions, but had contented himself with asepis by washing out the *cul-de-sac* and anterior chamber with distilled boiled water. Previous to the operation he had often bathed the *cul-de-sac* and anterior surface of the cornea with a sublimate solution (1:2000) and had sometimes had transient opacities of the anterior surface of the cornea. He thinks intra-ocular injections of pure boiled water have the following advantages: the iris contracts better and is less liable to prolapse; the eye can be cleared of blood, and, finally, it is the best means of expelling particles of lens matter and detached portions of capsule which external manipulation often fails to remove.—*France Médicale*, August 13, 1889.

On Apparent Movement of Objects Associated with Giddiness.—In a paper upon this subject read before the Ophthalmological Society of the United Kingdom, DR. BEEVOR defines giddiness as: (1) The apparent movement of objects in definite directions. (2) The sensation of the person himself moving round; and (3) Both sensations combined. In certain cases of epilepsy giddiness has been observed as an aura, and in the large majority of these cases, the apparent movement of the patient and of objects round him were in the same direction and generally corresponded to the direction of the initial rotation of the head in the fit. In auditory vertigo, in most cases, the apparent movement of the patient was in the opposite direction to that of objects round him. With actual movement of objects before the eye, giddiness was produced, as in case of a waterfall; but only that part of the retina perceived secondary after-movements which was acted on by the image of the falling body; the after-movements were always in the opposite direction to the real movements. If the eyes were fixed, giddiness was not produced, but secondary after-movements were; and the author thought it highly probable that the latter could be produced by a complimentary sensation of movement in the rods and cones of the retina which had become exhausted by continued movement. —*British Medical Journal.*

Some Forms of Traumatic Keratalgia.—DR. BRONNER, in a paper upon this subject, mentions that Dr. Grand-Clément had drawn attention to the affection, at the Paris Ophthalmological Congress of 1888. The peculiar feature of these cases was the severe pain resulting from a very small wound of the cornea. This pain usually recurred in the morning during several months. In one case the pain continued for eight months, and was so intense that the patient wished to have the eye removed. Relief was obtained by excision of a small macula at the right of the wound. In another patient the pain continued for two years. He suggests the use of hot fomentations for several weeks, followed by massage with yellow oxide of mercury ointment. If these remedies failed, the excision of any cicatrix resulting from the wound should be tried. MR. HULKE said that the pain and other symptoms were frequently more severe in superficial injuries of the cornea than in deep wounds, possibly because a large number of the extreme terminations of the nerves were lacerated. In most cases of removal of corneal epithelium, if the eye was kept quiet, the epithelium rapidly reformed, but in a few the pain persisted after the wound had apparently healed.—*British Medical Journal.*

DERMATOLOGY AND VENEREAL DISEASES.

By G. L. SIMMONS, JR., M.D., Sacramento, Cal., and
D. W. MONTGOMERY, M.D., Professor of Pathology, University of California, San Francisco.

Calomel in the Treatment of Tuberculosis of Wounds.—G. MARTELL, in experimenting on the treatment of tuberculous wounds (*Wiener med. Presse*, No. 9–14, 1889) with the preparations of mercury in powder form, has found that the dry preparations of mercury, particularly calomel, have in a high degree the property of causing such wounds to heal; *i. e.*, they have the property of killing the bacilli *in situ*. Further experience with this drug showed that tuberculous wounds under its influence became simple ulcers, and further that it had the property of protecting a wound, in a tuberculous subject, from reinfection by the bacilli circulating in the blood, and also that mercurial poison is not to be feared even if long used and in large quantity. The calomel, or the sublimate developed out of it, forms with the albumen of the pus and tissues an insoluble compound incapable of being absorbed. The examination of the pus showed the presence of this compound of albumen and corrosive sublimate, which is itself an antiseptic.—*Centralblatt f. Chirurgie*, No. 30, 1889. [If calomel be found so efficacious in the treatment of local tuberculosis, it may prove as great a boon in the treatment of tuberculous wounds, and some forms of tuberculosis of the skin, as Krause's treatment by lactic acid is for tuberculous ulceration of the larynx.—D. W. M.]

Symmetrical Gangrene.—PROF. BRAMANN, of Berlin, in a paper read before the German Surgical Society, gives a short historical sketch of this disease, first described by Raynaud in 1862, with a description of its primary stages of local syncope, and of local asphyxia; and a due consideration of the etiological factors, such as severe chlorosis, anemia, hysteria, acute febrile infective diseases, as typhoid fever, intermittent fever, etc., and primary neuritis, which are considered by some authorities to play a part in the causation of this affection. He showed three brothers, aged 7, 10 and 13 years, suffering from this very rare malady. Their parents and three other sons (two older and one younger) are entirely free from the disease, and in other respects healthy. Up to four years of age the patients had also been healthy, but it had been noticed that they had always from their birth large knobby finger tips, and were very awkward in handling anything. On attaining their fourth year, all three suffered from ulcers on the ends of the fingers, and also on the ends of several of the toes. These ulcerative processes went on till the ends of the fingers and toes, and distal halves of the nails, and even in the eldest till the entire distal phalanges were lost. The affection came on in single attacks of local asphyxia, with consecutive gangrene. These attacks followed one another more or less rapidly, and were accompanied by general malaise and severe pain, till finally the gangrenous portions were thrown off; healing was slow and painless. In this manner the youngest child had lost the ends of all his fingers, and of nearly all his toes in the course of three years; at present a gangrene of the thumb is undergoing demarcation. The ten-year-old patient had lost the end phalanges of all his fingers, the second phalanx of the second finger of the right hand, and the end phalanges of all the toes, including the first metatarsal bones of both feet. The stumps are all thick and knobby, and the skin has, to some extent, become attached to the ends of the bones. This patient had his last attack half a year ago. The eldest patient, aged 13, has defects on all his fingers and toes, but these losses of tissue are limited to the third phalanges. The two eldest patients have also symmetrical non-pigmented cicatrices on the dorsa of both feet, and also on the extensor and outer sides of both knees, which came from ulcerations occurring respectively at 6 and 8 years of age. The eldest patient is now suffering from a deep, perforating ulcer under the left heel. One of them has some diminution of sensation of the fingers; the other two a nearly complete loss of sensation of hands and feet, and diminished sensation of the entire upper and lower extremities. The sensation of touch is retarded; the tendon reflexes weaker than normal; the muscular sense is, however, normal. Neither contractures of the muscles nor thickening of the nerve trunks are present. The intelligence is, apparently, normally developed. The pulse is strong, and can be felt in all the usual situations, and permits exclusion of any disease of the arteries. Leprosy may be excluded, because there is no thickening of the nerves, nor any other symptoms of that disease; and, furthermore, both the parents and the patients live in a part of the country which is entirely free from leprosy, and never have in any way come in contact with lepers. Of all the other etiological factors giving rise to symmetrical gangrene, perhaps the most likely in this case is syringomyelia. In the discussion, KÖNIG (Göttingen) said he had seen acute symmetrical gangrene of the skin of both arms, and of the breast after typhoid fever. Bramann had never seen any such cases; they were, however, observed after severe illness in weak individuals, in whom either spontaneously or through pressure of the bed clothes, acute symmetrical gangrene supervened. FISCHER (Breslau) remarked that similar lesions to those shown had been observed in the American war, and were caused by trophic disturbances, following injuries of mixed nerve trunks. He had seen one case of symmetrical gangrene in the Charity Hospital, Berlin, and at the autopsy syringomyelia was found; THIERSCH had also seen, in similar cases, the same affection of the spinal cord. SOCIN (Basle) had seen a case of acute gangrene of both forearms, and both feet in a very anemic infant, and believed it to be due to endarteritis. He believed the acute cases, owing to disease of the blood vessels, should be stringently diagnosed from cases probably arising from affections of the central nervous system. BERGMANN (Riga) showed a case of leprosy with symmetrical mutilations of the fingers and toes, thickening of the nerves, and enlargement of the lymphatic glands. WAGNER (Königshütte) said he had seen a case of symmetrical gangrene which began as a herpes zoster intercostalis of the back, occurring in a man who had previously enjoyed good health. This case was evidently owing to trophic disturbances. BRANDIS (Aix-la-Chapelle) had seen two cases of gangrene in herpes zoster.—*Centralblatt f. Chirurgie*, No. 29, 1889.

Sodium Ethylate in the Removal of Superfluous Hair.—DR. JAMISON advocates (*Practitioner*) a new method of treating superfluous hairs, particularly where they are thickly clustered. Sodium ethylate is the agent used. The application is made with the patient under chloroform, if the surface to be treated is at all extensive. The skin is well rubbed with the caustic until it assumes an orange hue, and the applications repeated at intervals of a few weeks, according to the success or ill success of the treatment. The author cites a case of extensive hypertrichosis so treated, and though the hairy surface was on the forehead from scalp to eyebrow, and several applications were necessary, at the present time, three years after treatment, "the skin is hairless, smooth, and nice looking," and no disfigurement whatever.—*Journal Cutaneous and Genito-Urinary Diseases*, September, 1889.

Cause and Treatment of Acne.—At the recent Congress of Dermatology and Syphilis, M. BARTHELEMY presented the following axioms regarding the intimate relations existing between digestive troubles and the production of acne. (1) Acne indicates the condition of the stomach; that is, the presence of acne on the face or chest implies a dyspepsia, or a dilatation of the stomach and the various accompanying symptoms. It is only by the treatment of the digestive disturbances that the cutaneous affection can be definitely controlled. (2) Dyspepsia prepares the soil upon which the acne producing germs develop. They find a favorable soil in seborrhea, which is a direct consequence of defective elaboration or abnormal intestinal fermentation. (3) The acne eruption thus appears as a result of the germs, implanted from without, upon a skin rendered seborrheaic by internal causes. (4) The acne eruption is contagious and almost auto inoculable; that is, it is transmissible from one individual to another, if the condition of a seborrheaic soil is met. In fact, in the same individual a primarily infected gland infects others in its immediate neighborhood. This property of inoculability permits us to classify acne among the virulent affections as ecthyma, furuncle, and impetigo. The degree of the disease varies according to the resistance or to the depression of the organism. Thus we find the eruption discrete or confluent, very circumscribed or extended, intermitting or permanent. The treatment is based upon the etiology, and consists of skin antisepsis, to combat the activity of the acnegenic elements, and on the other hand antisepsis of the gastro-intestinal tract to render the system proof against the new germs.

MATERIA MEDICA AND THERAPEUTICS.

By WM. WATT KERR, M. A., M. B., C. M., Professor of Clinical Medicine, University of California, San Francisco.

Sub-Oxygenated Air in the Treatment of Phthisis.—It is somewhat startling at the present time, when so much is being done both by regulars and irregulars in the use of oxygen inhalations as a remedy in pulmonary affections, to find anyone advocating the very opposite treatment. At "The Congress for the Study of Tuberculosis," DR. VALENZUELA, of Madrid, read a paper on the curative effects in phthisis of sub-oxygenated air. His treatment is based on the theory that, as a given volume of the atmospheric air in high altitudes contains a considerably less weight of oxygen than at the sea level, so must there be, in high altitudes, an increased respiratory activity that the necessary amount of oxygen may be inhaled. To this increased respiratory activity, and not to purer or dryer atmosphere, is the beneficial effects of mountain air due. After making careful statistics of the amount of phthisis in different altitudes, and finding that the disease diminished as he ascended, Dr. Valenzuela decided to put his theory to the test by experimental methods. This he did by placing the patient in a pneumatic chamber, in which the percentage of oxygen had been diminished by the addition of carbonic acid gas, so that the respiratory efforts had to be increased to maintain proper æration of the blood. Each treatment lasted two hours, and was repeated three times daily for at least two months. Before introducing his method of treatment to the profession, the author tested it for eight years in his laboratory in Madrid, and for four years in his hospital. He obtained the best results: of 500 cases in the early stage, all recovered, and of 1,000 cases taken at hazard, 748 resulted favorably; difficulty of breathing disappeared; the thoracic measurement increased; the weight of the patient was greater, and the urine has less uric acid and more urea.—*Medical Press and Circular*, July 10, 1889.

The Influence of Permanganate of Potassium on Menstruation.—DR. W. STEPHENSON, Professor of Obstetrics in the University of Aberdeen, has published the result of prolonged clinical investigations into the effects of permanganate of potassium, which will materially aid in placing the drug upon a firm therapeutic basis. The entire paper may be found in the *British Medical Journal*, July 20, 1889, and is well worth a careful perusal, as it contains much information which must be omitted from the following synopsis. The drug was given in pill form, containing two grains of the salt, with a sufficient quantity of Kaolin ointment; one pill three times a day after meals; in a few cases, twelve grains a day were taken. Many of the patients continued to take the drug regularly for two or three months. [The pill form is preferable to the capsule or tablet, since it disintegrates more slowly, and hence is not so liable to cause pain in the stomach.] Since the greater number of cases of amenorrhea tend to right themselves, it was necessary that some corroborative proof of the influence of the salt upon the menstrual flow should be obtained beyond the mere appearance of the menses, and therefore Prof. Stephenson sought to find answers to the following questions: (1) When menstruation has not been suppressed, but the intervals between the periods have been irregular, does the permanganate promote regularity? (2) When the periods have been regular, but the quantity has been scanty, does the permanganate increase the amount of the discharge? (3) Has the remedy any influence in modifying the amount of suffering experienced at the periods? The results, as noted by Prof. Stephenson, show that while the drug is not infallible, it is at the same time a very potent and effectual remedy. In the matter of time, it tends to promote the normal periodicity both when the periods are too long and when too soon. It aids in restoring the menstrual flow when suppressed, in increasing it when scanty, and in moderating it when excessive. It relieves much of the menstrual suffering; has a direct influence on some forms of ovarian pain and the headaches of menstrual origin. It has a remarkable influence in checking leucorrhea. Its mode of action is not by a direct influence on the uterus and its appendages, or by giving oxygen to the blood, but by its effect upon the vaso-motor nervous system, improving and giving tone to the circulation.

Oil of Eucalyptus in Headache.—DR. MORRIS J. LEWIS and DR. G. E. DE SCHWEINITZ, Philadelphia, have forwarded a preliminary report on this subject, in the hope that others may be persuaded to adopt the remedy and, by the extended trial thus afforded, determine its therapeutic value. The dose is five minims every four hours, and will be more effectual if given in the prodromal stage. So far as present experience indicates, it is best adapted in headaches of the congestive type. In one case where an indiscretion in diet precipitated an attack, the drug did not appear to be of use, although it had relieved other seizures.—*Medical News*, July 20, 1889.

MEDICINE AND PATHOLOGY.

By ALBERT ABRAMS, M. D., Demonstrator of Pathology, Cooper Medical College, San Francisco, Cal.

Insomnia and its Treatment.—The treatment of this affection, according to JASTROWITZ, must include the *indicatio-morbi*, *causalis* and *symptomatica*. The *indicatio-morbi* must be based on a knowledge of the causation of sleep. Many theories exist, the dynamic, mechanical and chemical. The first theory supposes that rest is the necessary consequent of cerebral activity. The mechanical theory is based on the amount of blood present in the brain. The supposition of Blumenbach, aided by the experiments of Hammond, is probably correct; that during sleep, cerebral anemia is present. Whether the anemia produces sleep, or whether it is the result of sleep, is difficult to determine. Many measures, instituted with a view of directing the blood current to the periphery, produce sleep in sensitive individuals; such as warm baths, packings, etc. They often fail to act, but prove valuable adjuncts to treatment. According to Runke, certain substances (*Ermuedungssoffe*) accumulate in the muscles in a state of activity which produce the "tired feeling." The administration of lactate of soda, also an *Ermuedungssoffe*, will produce sleep. According to this chemical theory, sleep is due to auto-intoxication. The chemical theory will not explain why sleep fails to occur in some cases of excessive fatigue of the body. The *indicatio-causalis*, considers causes which act directly on the brain, such as diseases of that organ, disturbances of circulation and bodily pain. The medicinal treatment includes the use of various alcoholic preparations. They are especially indicated in acute diseases, when we fear by the use of other remedies to weaken the heart. A glass of beer on retiring acts favorably in many cases of chronic insomnia. Opium and morphine are not in his opinion merely sedatives, but hypnotics. As valuable as antipyrine and phenacetin may be for the relief of pain, morphine cannot be dispensed with. Morphine is possessed of tonic action, as evidenced by the fact that hunters often inject it in order to increase their muscular activity. Its use is attended with danger in severe cases of febrile bronchitis and pneumonia, as well as in cardiac lesions. It is contraindicated in chronic insomnia, for fear of contracting the morphine habit. Opium containing, as it does, alkaloids which produce convulsions, is used with more care in children than morphine, which, in tussis, for instance, is almost indispensable. Opium acts better in many senile forms of insomnia, and in sleeplessness, the result of intestinal troubles, as well as in protracted melancholia. The other opium alkaloids which act well are narceine and codiene, although the latter may produce convulsions. Chloral is without doubt the most potent hypnotic, but in large doses it diminishes blood pressure, and weakens the heart. It cannot be surpassed in delirium tremens, and the *etat de mal* of epileptics. The contraindications for its use, according to Liebreich, are cardiac diseases and hysteria. Jastrowitz used chloral successfully combined with a small amount of morphine. Paraldehyde does not affect the heart. Its continued use will provoke a condition similar to delirium tremens. It is contraindicated, owing to its disagreeable taste. It is recommended in excitable epileptics. Sulphonal is excellent, on account of its tastelessness and absence of odor. It has no action on the heart. In acute disease, it is not prompt in action. It does not subdue pain, it is valuable in insomnia, due to chorea, and all forms of mania. When used for any length of time, weakness in the extremities and a staggering gait develop. The remedies may be arranged according to their narcotic power and toxic action, as follows: Morphine, chloral, methylenhydrate, paraldehyde, sulphonal; according to the certainty of their hypnotic action; chloral, sulphonal, amylenhydrate, paraldehyde, morphine. Sulphonal, with reference to its toxicity, is last, and in certainty of action occupies the second position in the scale. —*Berliner klinische Wochenschrift*, July 8, 1889.

Experimental Diabetes Mellitus.—J. V. MERING and O. MINKOWSKI conducted a series of experiments, consisting in the complete extirpation of the pancreas in dogs, that resulted in the production of diabetes, which continued until the death of the animal. The symptoms observed, aside from the presence of sugar in the urine, were polyuria, polydipsia, bulimia and emaciation, notwithstanding the enormous ingestion of food. Large quantities of sugar were also present in the blood. No lesion of the solar plexus occurred, so that the phenomena following the operation are to be attributed exclusively to the ablation of the pancreas.—*Tribune Médicale*, June 13, 1889.

Diagnosis of Aneurisms of the Descending Aorta.—FERDINAND SCHNELL recommends the following procedure in diagnosis: An ordinary soft rubber stomach tube closed at its lower end, and containing at its upper end a glass tube, is filled with a colored fluid up to the glass tubing. This is introduced into the esophagus in the usual manner. If an aneurism of the descending aorta is present, its pulsations are transmitted to the fluid in the tube and can thus be recognized. In this way the exact situation of the aneurism can be determined. Aneurysmatoscope is the term applied to the apparatus.—*Muenchener medicin. Wochenschrift*, July 23, 1889.

Treatment of Typhoid Fever by Intestinal Injections of Tannic Acid. The beneficial results recorded by Prof. Cantani in the treatment of cholera by injections of tannic acid solutions, prompted MOSLER to test their application in typhoid fever, where the same indications are to be fulfilled, viz.: diminishing bacillary propagation and combating the toxicity of the ptomaines. Mosler begins with a solution containing 2 gms. of tannic acid to 2 litres of water, increasing the amount later to 10 gms. The injections are administered, with the patient in the recumbent position, twice daily. Dr. Backhaus' published statistics with this treatment in typhoid fever show that, whereas the febrile curve is in no wise influenced, the profuse diarrhea is completely controlled or beneficially modified.—*Muenchener med. Wochenschr.*, July 23, 1889.

Faradization of the Abdominal Parietes in Ascites.—MURET (*Révue de Médicine*) reports cases successfully treated by this method. It is especially valuable in ascites, the result of disturbances in the portal circulation, of less value when it is but a part of a universal hydrops. One of Muret's patients with chronic tuberculous peritonitis, was absolutely cured of ascites after long continued faradization. In a second case of ascites paracentesis was necessary every two weeks, and the use of large doses of diuretics was without effect. After faradization of the abdominal muscles, profuse diuresis was established. The best effects were observed when faradization was begun after paracentesis; for at this time energetic contraction of the abdominal muscles could be secured, whereas when the abdomen was tense even strong currents were without appreciable effect. The current is applied with the patient in the recumbent posture. Each abdominal muscle is to be separately acted upon at its motor point until at a *séance* every muscle is made to contract from 50 to 100 times. The sittings last about fifteen minutes, and are repeated daily.—*Berliner klin. Wochenschrift*, August 5, 1889.

Nervous Cough.—DR. MEINERT accepts the hypothesis of Charcot in explanation of the purely nervous cough, viz.: a lesion or compression of the so-called "cough centre." The following conclusions are formulated: (1) The existence of a purely nervous cough cannot be denied, although the designation is subjected to misuse. (2) The diagnosis, nervous cough, is only then acceptable when diseases of the thoracic and abdominal viscera have been excluded, likewise incipient pulmonary tuberculosis, hysteria, and tussis convulsiva. (3) The character of the cough and its persistency in each individual case constitute all that may be recognized as pathognomonic. (4) The multiplicity of remedies recommended indicates the futility of our efforts. The cure of the affection is often spontaneous, although sea voyages and change of climate are auxiliary.—*Wiener klin. Wochenschrift*, July 25, 1889.

The Remedial Value of Hypnotism.—As a result of extensive experimental studies, PROF. v. KRAFFT-EBING details his observations. The facts of hypnotism are old, but their scientific application new. It is very easy to hypnotize, but extremely difficult to utilize hypnotism as a therapeutic agent. The object of hypnotism is suggestion, *i. e.*, to successfully influence the psychic and nerve functions in general. Only the neuropathologist and psychologically educated physician can, after a careful psychical and physical study of the peculiarities of his patient, properly apply suggestions. The therapeutical province of hypnotic suggestion is unlimited in the functional disturbances of the nervous system. Every physician suggests in the conscious condition of his patient, but the suggestion acts incompletely, inasmuch as the patient is not sufficiently sensitive. Hypnotism, however, secures the sensitiveness by making the auto-suggestion latent, and eliminating the criticism of the patient. Thus control is given to unconscious psychical life, limiting the consciousness to inhibition. From unconscious life emanate disposition and instinct, which influence conscious life. Unconscious life has a more important influence on the physical functions, and the more this supplants the conscious psyche, the more certain the action of suggestion. Certain suggestions only act in profound hypnotism (somnambulistic form). It is often possible to influence disease beyond the state of hypnotism (posthypnotic suggestion). Perversion of desire, as in the use of alcohol and morphine, anomalies of sexual life, as well as paralyses, pain, etc., can be subdued by suggestion. The hypnotic treatment is least successful in the insane, and in neurasthenic and hysterical individuals. Many patients are hypnotized only after repeated attempts, and for therapeutical purposes hypnotism must be profound. The majority of people are capable of being hypnotized, but in a certain percentage only do suggestions act. Hypnotism is never harmful when properly applied. On the other hand, in those predisposed many nervous disturbances may arise. The development of the auto-hypnotic conditions is especially unpleasant. The selection of methods must be influenced by the idiosyncrasy of the patient, and the irritability of certain nerve tracts. In optic hyperesthesia Braid's method, and in acoustic hyperesthesia the production of the hypnotic state by acoustic influences must be avoided. The number of sittings is regulated by the therapeutic effect to be attained. The patients must not be overburdened with suggestions, and must be restored from the hypnotic state by simple means.—*Wiener medizin. Presse*, July 21, 1889. Opposed to the foregoing are the observations of v. ZIEMSSEN, one of Germany's eminent clinicians, who in language most forcible deprecates hypnotism as a remedial agent. He claims that it is of no value; at any rate its action is only temporary in trivial functional disturbances, whereas in many patients it is dangerous. When relief is afforded by its application, only the symptoms and not the disease is influenced. In epilepsy, chorea, paralysis agitans, and other general neuroses, no authentic observations exist where benefit has been obtained. In hysteria, repeated hypnotism results in aggravating the symptoms and in conducting a mild into a severe form of the disease. It cannot be denied, he says, that individual symptoms, such as contractures, paralyses, etc., have been temporarily influenced, but this only by substituting one anomalous cerebral condition for another. Not only in the hysterical but in every healthy person, the fact can be demonstrated that the hypnotic state is in no wise related to the natural sleep, the teachings of the Nancy school to the contrary. Repeated hypnotism will conduce to a condition allied to idiocy. He concludes his article by trusting to the intelligence of German physicians to abandon a measure which is only capable of doing harm.—*Deutsche medicin. Wochenschrift*, August 8, 1889.

MENTAL DISEASES AND MEDICAL JURISPRUDENCE.

By W. H. MAYS, M. D.; Professor of Mental Diseases and Medical Jurisprudence, University of California, San Francisco.

Responsibility of the Drunkard.—At the International Congress of Psychology, recently held in Paris, M. MOTEL read a paper upon this subject. He believes that a man is not responsible for a crime committed during the delirious period of drunkenness, nor when suffering from chronic alcoholism, where the brain has undergone those changes which compromise the regular functions of the organ. The responsibility was attenuated in the case of those naturally of a weak intellect, and who take drink badly. It is also extenuated when it has been proved that the man got drunk unintentionally. On the contrary, to those who get drunk with intention, and where alcohol was taken to give courage in order to commit a crime, no extenuation should be allowed. He proposed that, in view of the great increase of alcoholism in France, and the terrible crimes committed under its influence, the government be invited to take steps to guarantee society against criminal dipsomaniacs, and for that purpose to establish special asylums for the treatment of habitual drunkards.—*Medical Press and Circular*, September 4, 1889.

Concussion of the Spine in its Medico-Legal Aspects.—In a paper upon this subject, read before the American Medical Association, DR. H. H. SMITH arrives at the following conclusions: (1) Concussion of the spinal cord is no longer a matter of doubt, but may sometimes occur as the result of various forms of violence, there being nothing peculiar in the application of the force to the body, as the result of derailment or collision of railroad trains. (2) The pathological changes noted in the molecular structure of the cord, as the result of shaking, jarring, or so-called concussion of the cord, when attended by paralytic symptoms, may be due to a hemorrhagic effusion, or be shown, *post-mortem*, in softening and localized or limited atrophy. In cases due to hemorrhage, the symptoms may be improved by judicious treatment, and permanent disability prevented. (3) The possibility of preëxisting neurasthenia, or hysteria, or fraud on the part of the claimant, should be carefully noted in forming a *diagnosis* in these cases. (4) As the question of permanent disability, justifying exemplary damages, is frequently raised in claims of the kind alluded to, it should be recollected in forming a *prognosis* that numerous cases are reported of recovery, or marked improvement in a few weeks, and one in three years even after occurrence of the paralysis. (5) No physician should go into Court and swear that a plaintiff had had a concussion of the spinal cord, or of its nerves, unless he has proved the disturbance of the normal functions of the cord, as shown in sensation or motion, or both, and that the symptoms appeared *soon* after the injury.—*Journal American Medical Association.*

PUBLIC HEALTH.

By W. R. Cluness, M.A., M.D., Sacramento, Cal.

Mortality.—The deaths registered in 101 town districts of the State during the past month in a population of 829,615, correspond to an annual rate of 11.71 a thousand, the total mortality having been 310. 89 deaths were due to zymotic diseases, giving an annual death rate of 1.28 a thousand. Of these, 24 were due to typhoid fever, 21 to diphtheria, 13 to cholera infantum, 10 to whooping cough, 6 each to diarrhea and dysentery and cerebro-spinal fever, 5 to remittent fever, and 2 each to scarlet fever and erysipelas. 191 deaths were attributed to diseases of the respiratory organs, giving an annual rate of 2.76. Of these, 139 were due to consumption, 39 to pneumonia, 9 to acute bronchitis, and 4 to pulmonary congestion. 67 deaths resulted from diseases of the heart. The average annual death rate from all causes, occuring in the ten largest cities and towns in the State, and representing a population of 613,000 was 11.89. The highest rate for the month, occurring in cities having a population of 10,000 or more inhabitants, was reported from San Francisco, the lowest from San Diego.

Pollution of Water Supplies.—In the report of the Committee on the Pollution of Water Supplies, appointed by the American Public Health Association, the danger of sewage in drinking water forms an important document, and shows clearly that although chemical analysis may fail to detect the presence of sewage, yet when it is known that such material is drained into the water supply, there is danger of typhoid infection. To this latter question they invite special attention, because wherever typhoid fever becomes epidemic in cities, it can usually be traced to the presence of sewage in the water supply. To this, according to our present knowledge, must be added the specific germ, which it is generally believed is usually taken into the system by means of the water we drink. And whether our potable water is obtained from running water or from wells, the result is the same, because of the facility with which the latter may become contaminated by sewage. Fortunately, however, wells are comparatively inexpensive, and may therefore be abandoned with but little financial loss whenever deemed the probable source of infection; whereas, the large financial interests involved in the establishment of public water supplies are liable to prevent acknowledgment of the specific danger. The well is therefore condemned as soon as sewage is found to percolate through the area of drainage. The public supply should likewise be condemned on the same grounds. The committee attributes the efforts made to demonstrate the self-purification of contaminated running water to these financial interests, as well as to imperfect observation on the part of inquirers. While, however, organic matter contained in running water is transformed into ammonia and its nitrification, there is no ground for supposing that the specific germ of typhoid fever is given up to this natural mode of water purification. And that a direct relation exists between the water supply and the presence of typhoid fever in our large cities, can be observed in the mortality returns. Brooklyn, New York, Cincinnati, Boston and Philadelphia are instanced as cities having a death rate from typhoid fever in proportion to the quantity of sewage contained in their water supplies. Brooklyn being free from sewage, has but 15 deaths in every 100,000 inhabitants, and these are attributed to indirect infection and other local causes.

New York, which exercises great care in the exclusion of sewage from its water supply, has twenty-five in every 100,000. Boston, whose water is known to receive a larger quantity of sewage, has forty deaths in every 100,000; whereas Cincinnati and Philadelphia, whose water supplies are still more largely contaminated, have a correspondingly increased mortality from typhoid fever. Baltimore, on the other hand, has a steadily decreasing mortality from the disease in question, owing to the abandonment of its well system and the adoption of a purer supply. New Orleans also has a small death rate from typhoid fever, owing to its improved water supply; and that the improvement in this latter city is not attributable to sewerage is demonstrable from the fact that it possesses no such system. In Vienna the death rate from 1850 to 1874, while the water supply was obtained from wells and the Danube, ranged from 100 to 340 to the 100,000, whereas since the introduction of a purer supply it was speedily reduced to fifty and then to eleven; and that this favorable showing was wholly attributable to the quality of the drinking water was demonstrated in 1877, when some of the sources of the supply of spring water were cut off by frost, and the water of the Danube had again to be pumped into certain of the mains, the number of cases of typhoid fever suddenly increasing, especially in that portion of the city supplied by the water from the Danube. At present it is said that a case of typhoid fever is such a rare occurrence that Professor Nothnagel usually exhibits it to his students as a curiosity.

There is abundant evidence, also, that the soil itself may become contaminated, and that for a considerable distance from the surface it may become the breeding place for the germs of the disease in question. How to deprive these germs of their vitality, and render them innocuous, and how to prevent their entrance into our drinking water, is the great problem. Filtration will not accomplish it, for its germs, as well as those of all acute infectious diseases, are so infinitesimally small that they readily pass through any of the mechanical appliances that have been invented. Upon this subject an English Commission says: "Of all the processes which have been proposed for the purification of water, or of water polluted by excrementitious matter, there is not one which is sufficiently effective to warrant the use for dietetic purposes, of water which has been so contaminated. In our opinion, therefore, rivers which have received sewage, even if that sewage has been purified before its discharge, are not safe sources of potable water."

To obtain a pure water supply, although sometimes a difficult and expensive matter, can very generally be accomplished in this country if the penny-wise and pound-foolish idea be abandoned. Some neighboring lake, says the report, offers itself as a natural reservoir, requiring only the construction of conduits for the transmission of its waters. The drainage area of this supply must be kept under the closest supervision by the sanitary authorities of the community, for it is not enough to obtain a supply which is free from sewage; it must be kept so. Constant vigilance is the price of safety. Expense should not enter into the calculation; it should be done now, for at no distant day a ten-fold expenditure of time and money will be required. Much more, however, should be done by physicians in attendance upon typhoid cases than is customary, to prevent the ingress of the germs of this disease into our drinking water. What is termed bed-room disinfection should be more generally and effectively practised than is usual, and it should be the duty of the attending physician in all such cases to see that the excreta are thoroughly disinfected before leaving the bed-room, and before being thrown into the cesspool, privy, or sewer; but especially should the utmost care be exercised in preventing the evacuations from being cast upon the surface of a water shed which is used for a public supply. State and local authorities should coöperate in the enactment of laws for the protection of all water supplies.

In concluding, the Committee submits the following resolution:

Resolved, That it is the well-considered belief of this Association that it is an imperative necessity, especially in the more populous States, that State Legislatures should give their Boards of Health that financial support which would enable them to act intelligently on all questions pertaining to the public water supplies, investing them at the same time with the supervision of the said supplies, and with power to preserve these waters from contamination by sewage or other injurious matters.

METEOROLOGY.

By J. W. ROBERTSON, B.A., M. D., Resident Physician and Superintendent Home of Inebriates, San Francisco.

Autumnal Hurricanes.—The usefulness of the Signal Service has been repeatedly shown in its ability to predict the storms which prevail throughout the East. Nevertheless, certain of these, originating in the West Indies, approach the Atlantic coast so insidiously that the resulting damage can only be minimized and not altogether avoided. Storms have been broadly divided into "low-area storms" and the "hurricanes." They differ in their point of origin, the locality where they are most often found, the track which they pursue, the velocity with which they move and the amount of rainfall accompanying them. The "low-area storm" usually originates on the eastern slopes of the Rocky mountains, in British Columbia and in the United States; occasionally as far south as the Gulf of Mexico or the Carribean sea. It is essentially a land storm and but seldom reaches the ocean. It has a wind circulation inward and upward; moves in a northeasterly direction; has an elliptical form, and travels from 600 to 900 miles a day, usually making its exit up the valley of the St. Lawrence river. A hurricane, such as that which recently prevailed on the Atlantic coast, differs essentially from this. Visiting the coast not oftener than once a year, they are really ocean storms; originate in the West Indies; follow a parabolic path, going west across the Atlantic, then northward; often striking, but occasionally missing the Atlantic seaboard, they turn northeast and pass away to the eastward. They are accompanied by a heavy fall of rain, sharp barometric gradients and while, as a whole, they move on their parabolic course with great slowness the component parts whirl with the greatest violence and almost irresistible force. According to General Greely they are autumnal storms, 90 per cent. of them occurring in August, September and October. The following is a synopsis showing the heaviest storms of recent years, taken from General Greely's "American Weather": The hurricane which devastated Guadalupe, September 6, 1865, which is remarkable not only for the loss of life and property, but also for the very remarkable decrease of pressure 1.69 inch in seventy minutes, which occured just as the storm began. The Nova Scotia cyclone of August, 1873, was the severest ever recorded. It recurved between the island of Bermuda and Cape Hatteras, and its centre at no time touched the coast line. Twelve hundred and twenty-three vessels were known to be destroyed by it and 223 lives were reported lost, but the probable loss was estimated at over 600. On September 15, 1875, there was another most destructive storm. It recurved at Indianola, Texas, and nearly destroying that town, moved northeastward across the United States and left the coast between Capes Henry and May. While the destruction on the ocean was not so great there was much loss of life in the seacoast towns. At Indianola the wind blew with a velocity of eighty-eight miles per hour, forcing the sea over the town, destroying three-fourths of it and drowning 176 persons. October 21, 1878, a hurricane entered the United States, near Wilmington, N. C., and moving north over Washington and Eastern Pennsylvania it curved eastward, leaving the coast near Portland, Me. In Philadelphia over 700 buildings were demolished, shipping was destroyed, over a score of lives lost and its entire path was strewn with wreckage. The hurricane of August 16, 1879, not only did extensive damage to inland property, but over 100 large vessels were shipwrecked, dismantled or sunk, and 200 smaller vessels were destroyed. The wind reached a measured velocity of 138 miles per hour at Cape Lookout, where the anemometer was blown away. Other heavy storms noted were August 18, 1880, August 23, 1881, October 8, 1882, and August 19, 1886. In all of these the amount of property destroyed amounted to millions, and there was always more or less loss of life.

California—Tabular Statement for August, 1889.

STATIONS.	TEMPERATURE.						RAINFALL.		Mean Relative Humidity	WEATHER.			WIND.	FURNISHED BY—
	Mean	Highest	Lowest	Mean Highest	Mean Lowest	Mean Daily Range	No. of Days Rain Fell	Total Rainfall		No. of Clear Days	No. of Fair Days	No. of Cloudy Days	Prevailing Direction.	
Auburn ....Cal.	76.4	101.0	59.0	------	------	------	----	.00	------	----	----	----	W.	Southern Pacific Co.
Berkeley......... "	59.7	79.0	50.9	------	------	12.2	00	.00	83.1	15	3	----	--------	Obs. Univ. of Cal.
Colfax............ "	76.4	100.0	59.0	------	------	------	----	.00	------	----	----	----	SW.	Southern Pacific Co
Eureka........... "	55.5	69.0	47.0	60.6	50.3	10.3	2	0.13	89.2	10	13	8	NW.	Signal Service U.S.A.
Fresno........... "	82.6	110.0	54.0	101.0	63.3	37.7	1	T	29.4	30	1	0	NW.	" " "
Keeler........... "	82.0	101.0	64.0	95.2	70.2	25.0	1	T	27.8	27	3	1	S.	" " "
Los Angeles.... "	------	------	------	------	------	------	----	----	------	----	----	----	--------	" " "
Monterey .... "	64.4	77.0	57.0	------	------	------	----	.00	------	----	----	----	SE.	Southern Pacific Co.
Napa............ "	63.3	86.0	46.0	75.3	51.3	24.0	00	.00	------	17	14	0	S.	Sta. Napa Ins. Asylum
Oakland......... "	60 9	79.0	51.0	65.0	57.33	15.0	00	.00	87.1	10	21	0	SW.	J. B. Trembley, M.D.
Paso Robles.... "	71.5	101.0	47.0	------	------	------	----	.00	------	----	----	----	S.	Southern Pacific Co.
Red Bluff....... "	81.0	106.0	57.0	96.5	63.4	33.1	0	.00	40.8	30	1	0	SE.	Signal Service U.S.A.
Sacramento. ... "	72.0	102.0	51.0	91.8	56.3	35.5	0	.00	59.9	31	0	0	SE.	" " "
San Diego....... "	70.5	87.0	62.0	76.7	64.8	11.9	1	0.04	79.4	17	9	5	N.	" " "
San Francisco.. "	60.4	80.0	49.0	67.7	53.0	14.6	0	0.00	81.4	13	16	2	SW.	" " "
Santa Barbara.. "	67.3	91.0	53.0	78.0	58.0	20.0	00	0.00	------	21	9	1	E&W.	Hugh D. Vail.
Santa Cruz...... "	65.2	86.0	52.0	------	------	------	----	0.00	------	----	----	----	SE.	Southern Pacific Co.
Yuma...........A. T.	92.5	114.0	73 0	106.5	78.8	27.7	3	0.25	47.0	24	5	2	W.	Signal Service U.S.A.

*Precipitation from fog. Blank (----) indicates data missing.

Occidental Medical Times.

JAMES H. PARKINSON, L. R. C. S. I., EDITOR.

COMMUNICATIONS are invited from all parts of the world. When necessary to elucidate the text, illustrations will be furnished without cost to the author.

SACRAMENTO: OCTOBER, 1889.

SOUTHERN PACIFIC COMPANY'S HOSPITAL AND MEDICAL SERVICE.

The *St. Louis Medical and Surgical Journal*, in connection with the Convention of Railroad Surgeons, recently held in that city, alludes to the fact that the Southern Pacific Company's Hospital, at Sacramento, was the first of its kind in the United States. Few, perhaps, are aware that our Railroad Hospital was entitled to this honor, and it will be interesting to briefly review the conditions that led to its foundation, and the establishment of the present Medical Service.

In 1863, when the construction of the Central Pacific Railroad was commenced, accidents occurred from time to time amongst those engaged in the stupendous undertaking. The country along the line of road was then but sparsely settled, and the local practitioners available were thus brought into close relation with the projectors of the enterprise. When this had been completed, some of these physicians were selected so that at different points a surgeon could be found to attend to employés or passengers injured on the line. The first man appointed under this system was the late Dr. Bergman, of Reno, Nev., in 1870, and the next Dr. Meigs, of Elko, in the same year. In those days railroading in the far West was a new science, of which the inhabitants of California were ignorant, so that the force necessary to equip the road was mainly recruited in the East. These men were away from their families, and the majority of them were single, so that when sick or injured they were destitute of the comforts of a home, and often dependent for support upon their comrades or employers. Realizing that provision must be made for this anomalous state of things, the Company established the "Central Pacific Hospital" at Sacramento in November, 1868. The Hospital, which was erected at a cost of $64,000, consists of a main building, 60x35 feet, four stories and basement, with a wide veranda at each story, two wings, 35x52 feet, and a kitchen, 24 feet square, removed a few feet from the main building. There are six wards and eight private rooms; in all, accommodations for 125 patients. The six wards are each forty-four feet in length, by twenty-three feet in breadth. Those on the first floor are fourteen feet in height; on the second floor twelve feet, and on the third twelve feet six inches.[1] The building was carefully designed, and was well and substantially constructed, so that to-day, twenty years from its foundation, it still fulfils its purpose satisfactorily. Everything necessary for the treatment of injury or disease is provided, and in the matter of drugs, surgical appliances and diet, greater liberality obtains than is usual under hospital management. Every employé taken sick or receiving injuries when in the actual service of the Company, is entitled to medical treatment or admission for a period not exceeding the length of time he shall have been in the employment of the Railroad Company. None shall be entitled to medical treatment for the results of venereal infection, intemperance, bad habits, vicious act, hereditary, constitutional or previous infirmity. These rules, however, have always been most liberally construed. In 1888 the daily average number of beds occupied was sixty-three, at a cost of $1.30 for each bed; the total cost of maintenance per diem being $76.37. In order to meet the expenses in connection with the institution, fifty cents monthly is deducted from the pay of every employé, except steamboat hands and Chinamen. The first Surgeon to the Hospital was Dr. S. P. Thomas, who resigned in 1869, and was succeeded by Dr. A. B. Nixon, who served in that capacity until his resignation in 1885. He was succeeded by Dr. Thos. W. Huntington, at present Chief Surgeon to the Hospital. In addition to the usual staff, the Hospital is now officered as follows: A surgeon, two consulting surgeons, and a resident assistant, the latter a qualified practitioner, a dispenser, who is also steward, and a clerk. Out-patients are attended at the Hospital, and those preferring to remain at home are visited at their houses. In 1869 the number of cases treated at the Hospital was 306, the number of patients visited at their houses being 779. In 1888 the figures were 1,184 and 3,342, respectively.

This, briefly, was the Hospital system of the Central Pacific Railroad as it was inaugurated twenty years ago, and as it is still maintained in connection with the Sacramento Hospital. At that time the Company owned a line from San Francisco to Ogden only, and its employés numbered about 5,000.[1] To-day the Pacific system of the Company extends from El Paso, in the south, to Portland, Or., in the north, and from San Francisco, in the west, to Ogden, in the east, while branch lines and feeders extend in every direction. The army of men employed in working these railroads, and who pay hospital dues, is about 13,000. The multiplication of branch lines, the increase of traffic, and the establishment of many large depots, repair shops, round houses, etc., have also multiplied the sources of injury. The medical system has, therefore, been greatly extended, until the charges upon the hospital fund are barely met by the income. Local surgeons, to the number of fifty-five, have been appointed along the line of the various roads. Their duties are to render medical and surgical assistance and service to any persons injured by accident, and to sick employés on or about the railroad within their respective districts. Several of the local surgeons are paid where the amount of practice warrants the expenditure. The Company does not conduct any Hospital except that at Sacramento, but arrangements have been made with existing institutions in San Francisco, Oakland, Los Angeles, Tucson, and Portland, Or., for the admission and treatment of employés at points where no hospitals exist. Medicines are furnished by certain druggists or by the medical attendants, who are paid from the hospital fund. On October 1, 1888, Dr. F. J. Huse was appointed Superintendent of the Hospital Department. Previous to Dr. Huse's incumbency there had never been an oculist in the Company's employment. This defect was, however, soon remedied by the appointment of Dr. Wm. Ellery Briggs at Sacramento, and others at points where their services were likely to be urgently needed.

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[1] These figures have been obtained from a "Condensed History and Statement of the Working of the Central Pacific Railroad Company's Hospital," compiled by the late J. R. Watson, who was for many years its Superintendent, and always took an active interest in its welfare.

This, briefly, is the medical system of the great western corporation, and while we often hear that the Company is deriving a handsome profit from the hospital fund, it will be evident to those who know anything of such matters that the money must be very carefully handled to afford the necessary service.

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[1] This includes those employed in construction (except Chinamen), and who, as well as the operative force, paid hospital dues.

NOTES.

Death of a Physician from Leprosy.

In connection with the question of the contagiousness of leprosy, the *New Orleans Medical and Surgical Journal* says: "No physician on the Hawaiian Islands has ever shown any evidence of the disease, and yet there are several, personally known to the writer, whose business it is to examine every leper before he is sent to the asylum, and who, in the last ten or fifteen years, must have critically *handled* several hundreds of cases." Our contemporary is in error. Dr. E. Hoffman died on the Island of Oahu in the fall of 1887, of leprosy. The disease was well marked, and the diagnosis was confirmed by Dr. Trousseau and other physicians.

The Cause of Father Damien's Death.

We understand that the immediate cause of Father Damien's death was pernicious malarial fever. He was afflicted with leprosy in an advanced stage; but, for the intervening sickness, might have lived much longer. He absolutely refused to take quinine in any form, and therefore destroyed whatever prospect existed of prolonging life. Throughout his residence at Molokai, Father Damien had always dabbled in medicine. He went to the settlement shortly after its foundation, and for five years prior to the advent of a physician, was spiritual adviser, doctor, nurse and general legal administrator. When a medical attendant was permanently located on the Island, the Rev. Father did not take kindly to the innovation, and rather discouraged than advised the natives to seek the services of the new arrival. He faithfully ministered to their wants and gave them most devoted attention. These facts may in part account for his opposition to medical treatment, more than any intention of avoiding the prolongation of a wretched existence. In a recent issue we mentioned that a Father Gregory had also contracted the disease. We now learn that he died at the hospital at Kakaako, early in January of this year, a confirmed leper.

University Degrees in Payment of Medical Services.

Universities in the West are often accused of very irregular practices and it is currently supposed that "influence," pecuniary or political, is all-powerful in the matter of degrees. These unfortunate conditions are accepted as consequences of an imperfect civilization. Our feelings, therefore, have received a severe shock when we learn that the refined and cultured Eastern States are not guiltless in this connection. In a very outspoken article on "Cheap Academic Titles" by Leonard Woolsey Bacon, in the June number of the *Forum*, the following passage occurs in relation to the abuse of the honorary title of LL. D.: "A recent illustration of this is furnished by one of our foremost universities, in which a member of the governing board felt indebted for prosessional services to a practitioner of homeopathy, who had given the public documentary proof of his small learning and less wit, and the fellows of the university were impetrated, as a personal favor to their colleague, to constitute the man of globules *doctor utriusque juris.*" The *New England Medical Monthly*, commenting upon this remarkable occurrence, states that the university was Yale! and the "member of the governing board" the Rev. Timothy Dwight, D. D., LL. D., President of the faculty and of the corporation. This is very sad, indeed, and we commend it to the attention of certain journals who occasionally refer to the Western practitioner who wants his "diplomia" sent by express, C. O. D.

Payment for Official Advertising.

The "Press Association of Northern and Central California," that recently convened in this city, discussed at length the question of payment for official advertising at a uniform or fair rate. The matter of puffs, gratuitous reading notices, etc., was also mentioned, only to be condemned. The papers, it is true, receive pay for legal advertising, but at an unfairly low rate, and subject to dishonest competition. There is, however, another class of advertising, of interest alike to the lay and medical press, the insertion "as a matter of news" of notices and items in connection with the various departments of the United States Government. Each of these items has a choice of mediums through which to reach the particular section of the public that it concerns; all of them must be published in order to facilitate the work of the respective departments, yet their appearance is requested "as a matter of news." Our contemporary, the *Record-Union*, pertinently notes this in connection with the gratuitous publication of a request for contractors to furnish bids for carrying the mails between the depot and the postoffice in this city. More recently another gratuitous note appears in the daily papers regarding examinations for vacancies in the United States Civil Service, Postal Department, and the postmaster is directed to request the papers to publish this "as a matter of news." The medical press is directly concerned in this matter, by the publication of notices from the medical departments of the various services. We have been prompted to allude to the subject by the receipt of a communication from the War Department, Surgeon-General's Office, regarding vacancies in the Medical Corps U. S. A. The communication winds up with the usual stereotyped formula, "It is requested that you will give this a place in your journal as a matter of news, and call such attention editorially to it as you may deem proper. The regulations of the department are such that this notice cannot be regarded in the light of an official advertisement." These regulations should certainly be amended so that this notice should "be regarded [and paid for] in the light of an official advertisement." This rule obtains in other countries, and in England, a country not troubled with a surplus of revenue, such advertisements regularly appear in the medical journals. In common with other journals, we have always published these notices as a matter of courtesy to the Medical Corps. We believe, however, that the department should neither request nor receive courtesies of this character, nor should an opulent government be accorded gratuitous privileges. The United States presents to-day the altogether unique spectacle of a nation unable to dispose of its surplus revenue. We think that the medical press of the country might assist, in however humble a way, in the solution of this vast problem.

Eschscholtzia Californica.

As the plants indigenous to the Pacific Coast become more widely known, their medicinal properties have been investigated and determined. This has resulted in several valuable additions to our materia medica, amongst which may be mentioned Yerba Santa and Cascara Sagrada. The reported discovery that Eschscholtzia Californica contains an alkaloid apparently identical with morphine, would go to show that there is still an ample field for investigation. The *National Druggist* mentioned this fact some months ago, but expressed doubts as to the truth of the statement. However, in a more recent issue, that journal mentions the investigations of MM. ADRIAN and BARDET (*Bulletin Génerale de Thérapeutique*), who pronounce the alkaloid to be identical with morphine. Besides the alkaloid they have obtained another undescribed base, and indications of a glucoside, which would account for the fact that an extract of the plant produces in cold-blooded animals effects differing from those of morphine, even in large doses. DR. TER-ZAKARIANT, who has used an aqueous and alcoholic extract of the plant in the Cochin Hospital, believes that a very valuable sedative and anodyne, free from several of the unpleasant effects of morphine, has been obtained. DR. W. P. GIBBONS, of Alameda, to whom we referred the matter, has kindly furnished us with the following note:

"ESCHSCHOLTZIA: It was described by Chamisso in 1820, since which it has been found over most of the Pacific Coast, Idaho, and other localities west of the Sierras. The original type *E. Californica* includes five varieties described by different botanists—Douglass, Gray, Brewer and Watson. Prof. E. C. Green, of the State University, recently informed me that there are five distinct species, and he is authority to be accepted. The plant belongs to the natural order *Papaveracæ*, a name derived from that of the opium plant. Waltz obtained two alkaloids from the entire plant, one of which was a bitter alkaloid, the other an acrid one; he also found a small quantity of chelerythrin, the chemical composition of which is $C_{38}H_{17}No_8$. I have not seen any more recent analysis, though I have read of late discoveries of other alkaloids. It would have been satisfactory, from a therapeutie point of view, to have had the *National Druggist* confirm its assertions by publishing the results of chemical analysis, and of the physiological effects of the alkaloid claimed to have been discovercd as identical with morphine. At this day the bare assertion of the discovery of a new remedy, or of an old remedy in a new plant, requires to be sustained by something more than the chemistry of the laboratory before it can be received and endorsed in the medical profession. Years ago I made some experimental tests of the value of Eschscholtzia as a medicinal agent, without any definite results. It is among the first of our native plants to respond to the stimulus of spring, and the last to succumb to winter's breath. Its rich flowers are so dense in some localities, as to appear like a sheet of burnished gold. It is a low succulent plant, from six inches to a foot high, branching, the flowers being from one to three inches in diameter."

We commend this plant to the practical attention of scientific pharmacists, and trust that a reliable preparation will soon be in the hands of the profession.

Electric Shock.

The interest that the adoption of electricity as the means of judicial execution in New York has excited, and the diversity of professional opinion upon the subject, renders it desirable to place on record all cases of accidental shock, fatal or otherwise, occurring in connection with electric light and motor plants throughout the country. The following accident that recently occurred at the works of the Oakland Electric Light and Motor Company, presents some interesting features. July 24th, at 10 A. M., Mr. Wm. Sharpe, the manager, was engaged in measuring the resistance of the electric light circuits. All the terminals are secured to binding posts on a switch-board, on which the electric motor circuit was also connected. The latter is fed by two Wiesse dynamos, coupled in series, the maximum voltage of each being 750 volts. At the time of the accident, these were supplying about 40-horse power, representing a current of 20 ampères. Thinking that the contacts at the binding posts were not perfect, Mr. Sharpe looked around for something more suitable, and selected a switch line that was hanging up. One end of this was connected by a brass connector to the end of a wire, forming part of a loop running a 12-horse power motor; the other end was fastened in a binding post on the switch-board. Being unaware that this motor was switched into the regular motor circuit, he proceeded to slack up the set screw, holding the wires together, with a screw-driver. As the wires did not separate, he took hold of one in each hand and pulled them apart, thus placing himself directly in the circuit through which the whole force of the current had to pass. He at once realized that he had made a terrible mistake, and graphically describes his feelings: "My hands were paralyzed, my arms were as stiff as bars of iron, and the cords stood out in large bunches; my head was turned round in the direction of the current[1]; my eyes bulged out with burning pressure and glazed over; then I lost my senses and fell to the floor." The fall pulled one of the wires, which was attached to the ceiling, out of his hand and so broke the circuit. He at once recovered his senses, and attempted to recouple the wires, when some of the employés interfered, but he was sufficiently collected to give the necessary directions for opening the circuit. The time of contact was not less than five nor more than eight seconds. There was no pain to speak of—not more than would be felt from a strong galvanic battery. His hands and fingers were burnt, but owing to the fact that they were moist, and that he had a firm hold on the wires, the burns were slight. The shock to the nervous system was very severe, and two months later the effects were still evident. The voltage in the circuit, measured the day of the accident, and again the following day at the same time, was between 1400 and 1440 volts. Owing to the increased resistance interposed by Mr. Sharpe's body, the voltage of the dynamos was probably raised to their utmost, or 1600 volts. The explanation why he was not instantly killed is, that the current from the Wiesse dynamo is practically continuous, and there is a complete absence of the "kick" or alternation that makes a "death current." In the Weisse dynamo there are eighty sections in the armature; in the Brush eight sections, and in the Thomson-Houston only three. All these currents are interrupted, but in the Weisse the breaks follow each other so closely—say 80 x 1200 a minute—that they are not felt in the current.

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[1] Towards the right shoulder, the current entering by the left hand and passing out through the right.

SOCIETY PROCEEDINGS.

SACRAMENTO SOCIETY FOR MEDICAL IMPROVEMENT.

Regular Meeting, September 13, 1889.

The President, A. E. BRUNE, M.D., in the Chair.

DR. T. W. HUNTINGTON read a paper upon "A Case of Loreta's Operation for Stricture of the Pylorus." (MEDICAL TIMES, Vol. III, p. 474.) The patient subsequent to his discharge from the hospital had suffered from some indiscretions in diet, but under a stricter regimen this discomfort had disappeared.

DR. W. A. BRIGGS regarded the case as a success. If, in the future, there should be a recurrence, he suggested the establishment of a gastric fistula through which dilatation could be maintained.

DR. W. A. BRIGGS read a paper on "The Diagnosis and Treatment of Ectopic Pregnancy in its early months."

DR. G. L. SIMMONS had seen the case reported, and was at that time in doubt as to the existence of extrauterine pregnancy. He thought that it was a cyst connected with the ovary.

DR. C. B. NICHOLS said that a positive diagnosis of ectopic pregnancy was exceedingly difficult. He had seen two cases. One of them a woman, 40 years of age, presented several symptoms of pregnancy, including enlargement of the abdomen and cessation of the menstrual flow. Instead of being taken with labor pains she developed acute peritonitis. At this time extrauterine pregnancy was diagnosed. Five years later he had made a *post-mortem* examination of the subject and found a well-developed child in the abdomen. The fluid contents of the cavity were very offensive, and death had been due to septic infection.

Encysted Peritonitis.—DR. T. W. HUNTINGTON reported the following case: D. F——, æt. 22, was referred to me by his attending physician, Dr. A. B. McKee, of Tuscarora, Nev. From childhood has had occasional attacks of circumscribed peritonitis, always located in the right ileo-cecal region. The present trouble began with one of his usual attacks on June 28, 1889. This was attended by obstinate constipation, rise of temperature from one to three degrees, loss of appetite, and severe pain and marked tenderness in the right ileo-cecal region. Early in July a small non-fluctuating tumor was detected at the seat of former trouble. This gradually increased in size, and the patient's general condition was correspondingly enfeebled. While *en route* to Sacramento the tumor increased rapidly in size, and on examination I found a large fluctuating mass occupying the right lumbar region extending into the umbilical and right iliac regions. Suspecting that the tumor was due to a collection of pus, on September 5th, 1889, a large aspirator needle was introduced, when much to my surprise a flow of serum was obtained, resembling ascitic fluid in every particular. The cavity was immediately emptied of its contents—thirty-eight ounces in all. In five days the cavity had refilled, and there was no improvement in the patient's general condition. He was again etherized, and a free incision was made along the margin of the quadratus lumborum muscle at the level of the umbilicus. Having reached the wall of the cyst it was punctured, and the opening enlarged by use of Bigelow's dilators. About the same amount of serum was evacuated as before. A rubber drainage tube was introduced, the cavity was irrigated with sublimate solution (1:5000), and a voluminous antiseptic dressing was applied. From this point the history of the case was one of rapid recovery. On the first of September the cavity was wholly obliterated, the external wound was closed, the bowels moved normally, and the patient's general condition was excellent. The case was doubtless one of encysted peritonitis.

SAN FRANCISCO COUNTY MEDICAL SOCIETY.

Regular Meeting August 13, 1889.

The President, GEO. CHISMORE, M. D., in the Chair.

Extrauterine Pregnancy.—DR. H. KREUTZMANN reported a case of extrauterine pregnancy. The patient presented all the signs of pregnancy that had existed on former occasions, but, in addition, had suffered from severe flowing and abdominal pain on movement of the fetus. Examination showed many aspects of pregnancy, but the uterus was found to be empty. The diagnosis of extrauterine pregnancy was made. The time for delivery passed, and afterwards septic symptoms began to develop, which led to the supposition that the child was dead and that decomposition had commenced. Abdominal section showed the ovisac adherent to the uterus, intestines and peritoneum. Upon opening the ovisac a large quantity of bad smelling gas escaped, and a full grown, but dead and partially decomposed, child was found. The extensive adhesion of the placenta made the risk of hemorrhage so great that it was allowed to remain *in situ*, and for the same reason the entire ovisac was not removed. The symptoms mitigated decidedly after the operation, but, notwithstanding careful irrigation and other precautions, the patient died upon the seventeenth day. In regard to treatment, Dr. Kreutzmann believed that removal of the fetus as if it were a tumor, was better than the use of electricity, or any other method. He thought that in the case of a living child, the operation should be undertaken as soon as possible after the sixth month, and immediately when the child was dead and decomposing. The method of procedure would vary with each individual case.

DR. W. F. MCNUTT thought that the case was very interesting, because the woman had lived so long after the death of the child, and also for the reason that the membranes remained unruptured, the general rule being that the ovisac ruptures early. He had treated a case a few weeks ago by repeated application of the faradic current, with the result that the tumor, which was in the early stage, shrivelled up, and the patient was now enjoying good health, the only indication of her trouble being a slight thickening of the tube. In the case mentioned by Dr. Kreutzmann, he would not have left the placenta.

THE PRESIDENT said that in some cases expectant treatment was followed by very happy results. One case which he had watched from the third month to term, suffered from labor pains for three days, after which all symptoms disappeared, the patient recovered her full health, and about twelve years later some inflammatory trouble ensued, during which the remains of the fetus were removed *per rectum*.

Apparatus for Sterilizing Milk.—DR. C. B. BROWN exhibited an apparatus which she had designed for the purpose of sterilizing the milk used by infants that are raised on the bottle. To show the necessity for some such custom in this city, she read the official mortuary statistics, which showed that more than one-fifth of the deaths during the last year had been among children under two years of age, nearly all of them being due to disturbances of digestion. The apparatus consisted of a tin box, in which were placed six feeding bottles, supported by a rack; the box was filled with water and placed over a spirit lamp, where it was allowed to boil for about forty minutes. The apparatus was examined by the members, all of whom regarded it as a very useful adjunct to the subject of infant dietetics. It was, however, suggested that the diarrhea and digestive disturbances, which so largely contribute to infant mortality, were not due so much to improper food as to variations in climatic conditions.

Regular Meeting, August 27, 1889.

D. W. MONTGOMERY, M. D., First Vice-President, in the Chair.

Treatment of Local Inflammations by the Application of Flexile Collodion.—DR. L. BAZET reported his experience in the treatment of local inflammations by the application of flexile collodion, as suggested by Dr. Robert de Latour, of Paris, in his work on "Animal Heat." In warm-blooded animals, heat results from two inverse operations: one preparatory, the hematoze, which is accomplished at the venous pole of the blood circulation; *i. e.* in the capillary network, where the vessels carrying the dark blood terminate in the parenchyma of the lungs; the other effective, the area of combustion, realized at the arterial pole of circulation; *i. e.* in the capillary network, where the vessels with red blood terminate. Combustion at the arterial pole of circulation is effected through the agency of the ganglionic nervous system, and the current given off by these nerves is analogous to galvanic currents, under whose actions are accomplished similar combinations in the inorganic world. The physiological object of animal heat is to promote the flow of blood in the capillaries; and in all human beings heat is the force to which the capillary circulation is subservient. Two degrees above $36° \frac{7}{10}$ centigrade is the extreme limit in the physiological state; beyond that it is a morbid state. Hence, exaggerated animal heat, in a region more or less circumscribed, determines inflammation in that region. If, in such a case, we use heat as medication, we will have more activity in the capillary circulation; while cold will lessen the progression of the blood in the capillary circulation and occlude even its minute vessels. By consuming the heat whose production is in excess in the organic tissues, the refrigerant medication can easily moderate the material phenomena connected with this exaggerated production, but it does not check the production itself, which is the initial factor in the causation of the morbid state. This latter end is achieved by the use of an isolating medication, powerless against the existing heat, but powerful over the heat to be produced, and can be carried out in practise by the application over the inflamed area of a coating that will prevent the skin from coming in contact with the atmospherical air, it being a fact that all production of heat ceases immediately in a body so isolated. Flexible collodion, composed of 92 parts collodion, 5 parts Canada turpentine, and 3 parts castor oil, is the impermeable coating generally used. He did not pretend to maintain that collodion was an infallible remedy in all cases; but he could, without hesitation, pronounce it to be one of the best therapeutical agents at our command, provided we give it a fair trial. The application is simple; the result is immediate, showing itself by the disappearance of pain and the resolution of swelling within from six to forty-eight hours. The *technique* of the application is very simple. The coating must be applied two or three times over the inflamed part; from time to time the coating should be inspected, and any fissure painted over again. Dr. Bazet exhibited several cases of erysipelas, erythema, and other inflammations of the skin, which had been successfully treated by this method. He had also found that the pain which follows testicular injections can be prevented by subsequently painting the parts with collodion.

Lumbar Hernia.—Dr. G. L. Fitch exhibited a well marked case of lumbar hernia, traumatic in its origin. This lesion is of such rarity that a description of it is omitted from most of the leading works on surgery.

Malpractice Suits.—Dr. C. N. Ellinwood, chairman of the committee to procure legislation that would in some measure protect physicians in unwarrantable actions for malpractice, had, at a former meeting, stated that the committee was not then ready to present its final report. He suggested that, as their efforts with the last Legislature had failed, the Society should undertake the duty of protecting its members. A committee might be appointed to investigate each case, and, if it reported that the medical attendant was blameless, the Society would then assume all responsibilities in the suit. The question, which had been made a special order, was then taken up.

Dr. Ellinwood, in submitting the foregoing proposition, said that he did so at the suggestion of several prominent members of the profession, who believed that it would have the double effect of uniting the profession and diminishing the number of suits.

Dr. W. Watt Kerr did not agree with Dr, Ellinwood. Such a step was foreign to the present constitution of the Society, and although that could be overcome by making the necessary amendments, there would still remain the graver question of finances. The present funds of the Society were not sufficient to stand even one of the usual suits, and from his experience in former cases, he was certain that any attempt to assess the members would only result in the immediate resignation of seventy-five per cent. Neither was it at all likely that the number of suits would be diminished, but they would rather be increased; for such suits were conducted not by respectable lawyers, nor even primarily by the desire of the patient, but at the instigation of "shysters," who would only be too ready to recognize that there was more money in a corporation than in the individual. He believed that members should assist one another individually, but not as a Society.

Dr. J. D. Arnold endorsed all that the former speaker had said, and would also suggest that it was almost dangerous to moot such a topic, for public sympathy in such cases is almost always with the plaintiff, and should it be learned that the members were banded together for such a purpose as proposed, they would regard the plaintiff as not only a victim of malpractice, but of organized persecution, and the Society would assuredly be mulcted.

Dr. Jas. Simpson fully agreed with all that had been said against the proposition, but he thought that even a greater objection lay in the fact that as soon as the Society adopted such a scheme every member became an intesested party, and this fact would completely destroy his or her testimony as an expert witness in the case. He believed that in an unjust suit the members should assist one another in every possible way, but not as a Society. As the subject was only brought up for informal discussion, it was dropped without coming to a vote.

SPECIAL CORRESPONDENCE.

LEEDS.

[FROM OUR SPECIAL CORRESPONDENT.]

The Annual Meeting of the British Medical Association.

The business of the fifty-seventh annual meeting of the British Medical Association commenced on Monday morning, August 13th. There was at once a little breeze, a Surgeon Major Ince, formerly of the Indian Medical Service, taking upon himself the responsibility of raising the question about which there was so great a disturbance last November—the publication of the "script" of Prof. v. Bergmann's. The meeting was impatient, sick of the whole subject, which had been disposed of half a year ago. On the following day the same speaker moved an amendment to a resolution expressing the confidence of the meeting in the action of the elected representative, council and its committees; this resolution was moved by Mr. Lawson Tait and seconded by Dr. Robert Barnes, who are not often found on the same side of a question. It was moved and carried as a response on the part of the whole Association to a letter signed on behalf of the London malcontents by Sir Joseph Lister, Dr. W. H. Allchin, Mr. W. A. Meredith, and Dr. John Williams: "Many members of the Association have been much disappointed to find that the hopes which they had been led to entertain of improvement in the conduct of the *Journal* have not been fulfilled, and so strong is their feeling that a large number of men in influential positions in the profession, warmly attached to the Association, but jealous of its honor and despairing of seeing the improvement they desire, have expressed their determination to resign their membership. But before carrying into effect a resolution so serious it has been thought right to approach you, as the governing body, with a request that you will give this matter your earnest consideration and take such steps as shall make the *Journal* in all respects worthy of the Association which it represents." To this letter the President of the Council wrote, acknowledging its receipt, and said: "I will lay it before the Council when they meet in Leeds. I must be permitted, meanwhile, to assure you that you may safely leave the honor of the Association where it has been safely preserved for so many years." The Council passed the following resolution: "That the Council do not admit that the signatories of this letter are better judges than themselves, or more solicitous than they are for the honor of the Association and of the profession, but if there are any points which the signatories desire to particularize, in which they consider the *Journal* admits of or calls for improvement, they will, as they ever have done, on receiving them through the representatives of their committee and the Council, be ready to give to such suggestions their most careful consideration." Mr. Lawson Tait, with his usual knack of calling a spade a spade, hinted very broadly that the whole virtuous indignation was really a bit of journalistic jealousy, whereat the meeting laughed. The resolution adopted ran in the following terms: "That this meeting desires to express its satisfaction with the result of the present representative system of government of the British Medical Association and its approval of the steps taken by the Council for the management of the *Journal.*" This was probably the most important incident of the meeting, but amid the bustle and excitement of the sectional meetings it has already been temporarily forgotten.

The address of the President (Mr. Wheelhouse) was discursive, and its chief interest lay in the expression of his opinion that we shall have sooner or later to return to some modified form of the apprenticeship system, in order to give a more practical character to medical education. The address in medicine by Dr. Hughlings Jackson, dealing with the influence of the theory of involution on the progress of medicine, must be carefully studied in print before its full significance can be understood, and the address in surgery by Mr. T. Pridgin Teale dealt with certain surgical details, so that its value would disappear were I to attempt a summary. At the time I write, the address on psychology has not yet been delivered. Sir Crichton Browne has chosen for his subject the "Hygienic Use of the Imagination," and it will probably turn out to be a highly popular and eloquent address.

There have been good discussions in the section on medicine, on tubercular disease and on the prognosis of albuminuria; in the section of surgery on typhlitis, and on renal surgery; and in the section of obstetrics on placenta previa. The section of psychology has worked most enthusiastically, and those on opthalmology, laryngology and otology have also seemed unusually full. In the section of pharmacology and therapeutics there was to-day a short but interesting discussion on foods for invalids and infants, introduced by Dr. Burney Yeo. Speaking of food in acute disease he expressed the opinion that there was nowadays a tendency to over do it. He pleaded for more discrimination in the feeding of fever patients. Dr. Sidney Martin followed with a chemical paper on the same subject, speaking at the conclusion of a somewhat discursive debate, and the President of the section, Sir William Roberts, made some very witty and trenchant remarks on the "Brown Bread Fad," which I wish I could reproduce with all the charm of manner which he possesses. "Some people," he said, "had fallen foul of the bakers and millers for giving us fine white bread; there was even a body with the high sounding title of the 'Bread Reform League.' They said that we were all degenerating because we were fed on white bread, from which the salts had been largely withdrawn by the removal of the bran; future races were to have no teeth, no bones, and no muscles. But it was not probable that the truth could be so entirely at odds with the universal practice of civilized mankind. It was said that white bread was poor food, and it was certainly true that bread was poor in several directions; it was poor in fat, but we did not think it necessary to add the fat to the bread in the manufacture; mankind had got into the habit of spreading butter on his bread; white bread contained too little salts, it was said. Well, the baker added a little soda, which not only improved its appearance but added to its nutritive value. So with the albuminoid constituents. Man did not live by bread alone; we ate meat or an egg or drank milk with bread. Bread was not a perfect food and could not be made a perfect food; we did not seek in bread a perfect food. What we sought in bread was a highly digestible farinaceous food. The destiny of bran, was, he believed, in the present day what it was two thousand years ago—to feed the swine. Bread with the bran, however, was good as a variety. Change and variety was a peculiar attribute of the diet of civilized man." Dr. Burney Yeo, in the course of his reply, said that he had at one time been in the habit of using brown bread largely in his own diet; he was led to abandon the habit; he had a severe attack of colic relieved by the action of an aperient which brought away large masses of bran, which had doubtless been gradually accumulating.

The number of members attending the Congress is a little over 900 to-day. This is rather less than usual, to be accounted for partly by the postponement of the meeting for a fortnight, which was, unfortunately, necessary. The social features of the meeting have been very successful. Hospitality of the most lavish kind has been extended with all the warmheartedness characteristic of the "north countree."

LEEDS, August 16, 1889.

GERMANY.

[FROM OUR OWN CORRESPONDENT.]

Grievances of the Profession.—Overcrowding.—Legal Disabilities.—The New General Hospital in Hamburg.—Bülau's Operation for Empyema.

This period of the year is, in trade parlance, the dull season for medical men in general, the time for weighing the advantages and disadvantages of the profession, and for finding a great many more of the latter than there ought to be. Such, at least, is the conclusion that the meeting of the Physicians' Association ("Aerzte Verein"), at Brunswick city, appears to have arrived at, and they certainly may be supposed to represent the sum of German practitioners at large. Perhaps the chief reason that induced the Association to take a gloomy view of the case, is the incontrovertible and unwelcome fact of an appalling increase in the number of medical men in this country, out of all proportion to the increase of the population. Every year the number of diplomas conferred shows a considerable augmentation, and hitherto no means of checking this overgrowth of competition have been found. It is true that in America you have more medical men to the 100,000 inhabitants than we have; still the struggle appears to be, in all respects, just as keen here as on the other side of the Atlantic. Various proposals were brought forward to counteract the evil, the most sensible, perhaps, being the resolution to lengthen the required period of study, and especially to alter the method of examination. The German medical examination is, indeed, scientific and searching enough, but for all that there are loopholes to let even a dullard slip through. Thus, the regulations say, if a candidate fail to satisfy the examiners in any one branch, he is to be referred for three months, or six, as the case may be; but those portions of the examination in which he has succeeded are to be counted as passed, once for all. In consequence, it may so happen that the candidate having failed once at least in every one of the seven divisions, can finally, by a three or six months' training for each special branch, succeed in obtaining quite a respectable looking diploma. Of course, the examiners are fully aware that such a candidate can hardly be considered capable of fulfilling the onerous responsibilities of medical duty, but still, under the present regulations, they have not the power of refusing to pass him, which is naturally not exactly conducive to keeping up the standard of medical efficiency. Another serious grievance under which we labor is the definition of the legal code, by which the medical profession is classed, *pro pudorem hominum* as a trade (*ein gewerbe*). In Germany, a duly qualified practitioner has, beyond his superior knowledge, positively no advantage whatever from his diploma in the contest with quacks and charlatans. Of course, if a patient treated by a quack takes an unfavorable turn, the case is sometimes inquired into by the authorities, and occasionally the pseudo practitioner is duly punished. But, on the other hand, if a qualified doctor commits any serious mistake, he undergoes just as severe penalties here as anywhere else. It is only a little while ago since a physician of Lübeck, Dr. Binder, was sentenced to several weeks imprisonment for an *error artis*, and would undoubtedly have been put in jail, but for a petition to the Senate, signed by some thousands of his friends and patients craving his pardon. As, furthermore, the *irregular* practitioner has the advantage of being able to advertise and to use other means of attracting patients which are naturally desired to the profession, it very frequently happens that a deluded public lay both gold and glory at the feet of the astute charlatan. And as if this were not enough, there are even clubs which acknowledge a certificate from such autodidacts as equivalent to that of a qualified man. In the new code of civil laws, with which the nation is to be shortly benefited, this state of affairs appears destined to be rendered permanent by the sanction of the highest authorities, for in the paragraphs dealing with the question of remuneration for medical services, the profession is simply classed with artisans, midwives and all other persons who do work or perform medical services for which they receive payment; *i. e.*, quacks. This degrading paragraph, I am happy to say, has already raised so much righteous indignation that we may hope to see it removed or altered before the final passage of the law. Prince Bismark, however, in spite of his having experienced so much benefit from Professor Schweninger's application of Oertel's method to his case, was ungrateful enough not to accede to the request of the Physicians' Association asking for an official inquiry into the legislation on medical affairs, so the profession may look out and shift for itself. The organization of a central body of representatives for the material interests of the faculty, with branch sections throughout the empire, as has recently been instituted under the auspices of the Minister for Science, von Gossler, is therefore all the more welcome and valuable. Although still too young to have effected any material change, it is to be hoped that this arrangement will, in future, be productive of much good.

Turning from the darker side of our life to seek for something cheering and gratifying, among other achievements of medical science, I may be allowed to say a few words in praise of a great and permanent boon to an immense number of persons—the new General Hospital of Hamburg. I do not hesitate to say that this institution, which was finally completed and formerly inaugurated last month, although the greater portion of it has already been in use for nearly three years, embodies all the important improvements of modern sanitary progress. It comprises fifty-five blocks for patients, besides the necessary administrative buildings, dwellings for the medical staff and attendants, kitchen, disinfecting house, etc., etc. Situated about half an hour's drive from the city, on a moderate eminence, from which a good view of the pleasing neighborhood is obtained, this little town of about 1,200 sick inmates, with the necessary medical men, attendants, nurses and other workers, presents every facility for the successful combatting of disease in all its shapes. No expense has been spared to procure the best of everything, but at the same time most careful attention has been directed to making not only every building, but even every article of common use in the place, of the most approved pattern. Even the shape of the very chairs and tables has been selected with a view to making the cleaning and disinfecting of them as rapid and thorough as can be. In such little things, as well as in greater, the attention with which Professor Curschmann has supervised the construction of this important institution, truly and really created by his genius, is brilliantly evinced.

In connection with the achievements of Hamburg physicians, I will briefly describe Dr. Bülau's method of operating for empyema, which has for many years been extensively practised in that city, but which has hitherto, chiefly in consequence of his never publishing anything on the subject, not been so generally appreciated as it deserves. It was warmly recommended to the notice of the profession at the meeting at Wiesbaden by Dr. Eisenlohr, and has since, among others, been applied in the Charité at Berlin by Geh. Rath Leyden, who speaks very favorably of it, as an elegant and convenient operation. The details are as follows: After the necessary disinfection, a small incision is made in the skin at the spot chosen, the most suitable place being in the axilla in an intercostal space as near to the lowest level of the empyema as the individual case allows. As this cut is about the most painful part of the whole proceeding, anesthesia is unnecessary, a not unimportant danger thus being entirely eliminated. A stout, round trocar is plunged into the pleural cavity, the stilet is withdrawn, and an elastic catheter, just accurately filling the lumen of the cannula is slipped in. Dr. Bülau prefers a Nélaton catheter to an ordinary rubber drainage tube, as it is not so compressible; a point of some weight. The catheter is supplied at its internal extremity with two or three openings to admit of free exit of pus. It is inserted a few inches into the pleural cavity and the sheath of the trocar is then removed, the catheter being held closed either by hand or by a clamp, to prevent the possible entrance of air while manipulating. The edges of the wound maintain by their elasticity, firm contact with the catheter, which is then fixed to the wall of the thorax where it emerges from the pleural cavity by thin layers of cotton wool and collodion, a little powdered iodoform having first been sprinkled on the wound. In this manner a perfectly air-tight closure is effected. In addition a silk thread should be tied round the catheter where it emerges from the chest and the two ends fastened by means of adhesive plaster or strips of gauze pasted on the skin of the thorax. A little pad of cotton wool may in addition be wrapped round the whole and fastened with a roller to guard the catheter from being strained in case the patient be restless. This last precaution may, however, be injurious if applied before the collodion dressing is perfectly dry, as the air-tight occlusion, which is the salient point of this method, is liable to be impeded thereby. The outer end of the catheter (the thick edge having, of course, been cut off to admit of free passage through the sheath of the trocar), is now joined by a small piece of glass piping to an india-rubber tube reaching to the ground and filled (by the aid of a funnel and clamps), with a three per cent. solution of boracic acid. On lowering the outer end of this tube, after the clamp has been removed, the fluid within acts by the siphon principle on the pus in the thorax and a steady outflow is at once established, which is led into a glass jar containing a small quantity of some disinfectant (boracic acid), sufficient to prevent air from reaching the opening of the tube. In order to keep this from floating to the top of the fluid, the funnel is left in the end of the tube and may also be weighted with a little ring of lead. By this means the pus is pretty rapidly removed from the pleural cavity, the lung distending proportionately at the same time. After some days it becomes necessary to shorten the tube within the thorax, and to fix it anew, as the aperture tends to widen in course of time. If the flow gets blocked in the first few days, this is generally due to stoppage in the outer tube, which is easily remedied, care being taken to retain the siphon action. When strong enough to leave their beds, the patients may be placed on a chair during the daytime, and towards the end of treatment they can even be allowed to walk about, the glass jar being replaced by a bottle, which the patient carries in his breeches pocket. Almost at any time of the year one will find in one or the other of the wards a patient of this kind with his little bottle in his pocket, a representative of the sage's *omnia mea mecum porto*. The method is naturally equally applicable to non-purulent exudations in the pleura, where it affords the advantage of avoiding repeated tapping, so often necessary in this affection. Two cases of abscess of the liver, one due, as was finally shown, to suppurating echinococcus, and the other probably of dysenteric origin, were both treated by this simple method with complete recovery.

September 5, 1889.

REVIEWS AND NOTICES.

On the Treatment of the Morphine Habit. By Dr. Albrecht Ehrlenmeyer. Translated from the German. Physician's Leisure Library. Detroit: George S. Davis. Cloth, 50 cents; paper, 25 cents.

This little book, an English translation, from the work of Albrecht Ehrlenmeyer, is a detailed account of the author's views on this subject.

He enumerates the various methods in use, the rapid cure, the sudden cure, and the gradual cure of the morphine habit. The latter is the method advocated. The place where the cure should be undergone, is none other than a "Special Institute," in which the patient can be watched constantly, his liberty restricted, and the physician's orders obeyed to the letter. And in the end the patient's friends must also submit to rules. Such restrictions in this country are not easily imposed, and the results obtained here are less favorable than either in England or Germany, A chapter is devoted to the consideration of cocaine in the treatment. Cocaine does alleviate the "abstinence symptoms," but the favorable effects are of very short duration—15 to 25 minutes. Again, its paralyzing tendency on heart and vascular system militates against its prolonged use. These objections, coupled with the liability to the cocaine habit, an equally enslaving vice, render it of little practical value.

CANCER AND CANCEROUS DISEASES. By Sir Spencer Wells, Bart. F. R. C. S. CARDIAC DYSPNEA AND CARDIAC ASTHMA. By Dr. S. von Basch. THE INFLUENCE OF MENSTRUATION AND OF THE PATHOLOGICAL CONDITION OF THE UTERUS ON CUTANEOUS DISEASE. By Dr. L. Grellety. TENSION AS MET WITH IN SURGICAL PRACTICE. INFLAMMATION OF BONE. CRANIAL AND INTER-CRANIAL INJURIES. By T. Bryant, F. R. C. S. ANTISEPSIS AND ITS RELATION TO BACTERIOLOGY. By Dr. J. Neudorfer. Wood's Medical and Surgical Monographs. New York: Wm. Wood & Co. Price, $1.00.

The authors' names appended to each of the five monographs comprising this volume are an additional guaranty of good faith on the part of the publisher. The papers "Cancer and Cancerous Diseases," by Sir Spencer Wells; "Tension as Met with in Surgical Practice; Inflammation of Bone; Cranial and Intra-cranial Injuries," by Thomas Bryant; and "Antisepsis and its Relation to Bacteriology," by Dr. J. Neudorfer, are specially commended to the profession.

SWEDISH MOVEMENT AND MASSAGE TREATMENT. By Prof. Hartvig Nissen, Director of the Swedish Health Institute, Washington, D. C. With 29 engravings. Philadelphia: F. A. Davis. pp. vii—123. Price, $1.50.

The object of this little manual is evidently to correct some misunderstandings concerning the position which masseurs occupy in relation to the medical profession. To use the author's words, "We are specialists, and as such necessarily physiologists, and have the practical experience gained by the practice of many years in this one branch. But it is coöperation between the medical profession and specialists which is desirable and necessary in order to produce the best results." The manual epitomizes the movements, methods, and combinations of mechano-therapeutics, with a list of various massage prescriptions for certain cases. It may stimulate its readers to seek further knowledge in this neglected branch of therapeutics, and if so will accomplish its author's aim. Certainly in so small a book one can gain but a superficial knowledge of the "Massage and Swedish Movement Cure."

FIRST ANNUAL REPORT OF THE COUNTY HOSPITAL AND POOR FARM OF SAN DIEGO, CAL., FOR THE YEAR ENDING JUNE 30, 1889.

This Hospital, which was established in 1872, is situated about three and one-half miles from the city of San Diego, and has accommodation for sixty patients. Additional detached buildings will soon be erected. The total number of patients admitted during the year was 222. The cost of maintenance for each patient *per diem* was 23$\frac{1}{5}$ cents. Reports from physicians resident throughout the county indicate a degree of salubrity which cannot be conducive to medical practice; in fact Drs. Pruett and Parker, of Fallbrook, state that their practice "is principally confined to the treatment of non-residents." A list of the principal mineral springs of the county is given, and amongst the sanitariums we find that of Dr. Wm. A. Edwards receiving deserving notice.

FOURTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF THE STATE OF MAINE FOR THE FISCAL YEAR ENDING DECEMBER 31, 1888. Augusta: Burleigh & Flynt, Printers to the State.

This is a bulky volume of 336 pages, and contains the Secretary's report, reports from local Boards, of which there are 339, and some special articles. These show that a great deal of good work is being done. An outbreak of small-pox at the Cumberland Paper Mills was investigated, and traced to the handling of infected rags. As a result of this investigation, the Legislature has passed an Act compelling any person employed in or about paper mills, where rags are used, to be vaccinated, or revaccinated within two years previous to date of employment. The Secretary, under the head of "Various Sanitary Topics," enters exhaustively into the infectiousness of tuberculosis, the causation of diphtheria, and several other subjects. Regarding the identity of croup and diphtheria, he says he "believes that nearly all, and perhaps all cases of membranous croup, are diphtheritic in their origin and nature. Admitting, if we must, a membranous croup, with no etiological relationship to diphtheria, the want of any trustworthy diagnostic mark by means of which we may distinguish such cases from those which are diphtheritic, would compel us, as the only safe course, to regard all cases of membranous croup as cases of diphtheria, from a sanitary point of view, and to treat them accordingly, especially when diphtheria is prevalent." A paper on "Light Gymnastics for Schools," by Dr. F. N. Whittier, which is thoroughly practical in character and profusely illustrated, concludes the report.

TWENTY-FIFTH REPORT OF THE TRUSTEES OF THE CITY HOSPITAL, BOSTON, WITH REPORT OF THE SUPERINTENDENT AND MEDICAL AND SURGICAL STAFF, RULES FOR ADMISSION AND DISCHARGES, PROSPECTUS OF TRAINING SCHOOL FOR NURSES, ETC. Boston: Rockwell & Churchill.

This report, for the year 1888, shows that there were admitted to the Hospital 5,875 cases; the average length of stay of each patient being 22 21 days; the daily average number of patients being 378. The net cost *per capita* for each patient was $7.91 a week. Allusion is made to the difficulty experienced by all public hospitals in large cities, in refusing admission to those who are ineligible, by reason of non-residence or the nature of their diseases. This factor in hospital management is but little understood by the public, and these institutions are exposed to most unfavorable comment where instances of apparent neglect or indifference are brought to light. The necessity of certain rules of this character is well established, and their enforcement is inevitable. The Superintendent in his report strongly recommends the adoption of electricity as an illuminant, instead of gas, on the grounds of economy, absence of danger from fire, and non-contamination of the atmosphere.

THE WASHINGTON LIFE INSURANCE COMPANY. HISTORICAL, ACTUARIAL AND MEDICAL STATISTICS. New York: Published by the Company.

This is the title to a volume of 160 pages, published recently in New York by the company named. Its historical portion is more especially interesting to the friends and policy holders of the company, but the actuarial and medical statistics will be valued, not only by such as are directly interested in the subject of life insurance, but also by medical students and statisticians. The figures given in the various tables, and the deductions made therefrom, bear directly upon the question of the permanence of the institution of life insurance, and are of the most assuring character, demonstrating the accuracy and reliability of the mortality tables now in use by the life companies in the United States and Great Britain, and consequently, the ability of the companies to fulfill their contracts with policy holders. The statistics given demonstrate the careful manner in which the Washington Life Insurance Company conducts its business, and show it to be in every way worthy of the confidence of its friends and patrons. As a contribution to current, biological and statistical literature, the volume will be welcomed by students of life insurance and related subjects. The book is printed on good paper, in large and clear type; is handsomely bound in cloth, and reflects credit upon the publishers.

THE TREATMENT OF SYPHILIS AT THE PRESENT TIME. By Dr. Maximillian von Zeissl. THE TREATMENT OF INEBRIETY IN THE HIGHER AND EDUCATED CLASSES. By James Steuart, B. A. MANUAL OF HYPODERMIC MEDICATION. By Drs. Bourneville and Bricon. Wood's Medical and Surgical Monographs; Vol. 3, No. 2. New York: Wm. Wood & Co. Price, $1.00.

We gather, as regards the present line of treatment for syphilis, the following summary: When a patient is suffering from an initial lesion, and we find no evidence of constitutional syphilis, local treatment of the primary lesion is all that is necessary. If the first syphilitic symptoms on the integument appear in the form of a macular or papular syphilide, we do not give antisyphilitics, even if there are degenerating mucous patches. We should attempt to relieve them, and to induce involution by prohibition of smoking, by use of lunar caustic, and by application of tanno-glycerine (tannin 5 parts, to glycerine 20 parts). If symptoms have not disappeared at the end of eight weeks, or if no essential improvement is noticeable, we give iodides. If the symptom complex has not disappeared at the end of ten weeks more, or even if they have run their course, we may pass to mercurial treatment without any bad results, as regards their subsequent course. Zittman's Decoction and Gray Ointment are the favorites. Mercury is rarely ordered internally or subcutaneously. Injections of calomel are the most rapid and vigorous form of subcutaneous medication. The divisions on inebriety and on hypodermic medication are clearly written and very concise. Particularly valuable to the practitioner are the formulæ for the hypodermic administration of drugs at present used, but seldom, subcutaneously. We can recommend the volume as the equal of any previously published in this valuable series.

BOOKS AND PAMPHLETS RECEIVED.

Syphilis of the Nervous System. By H. C. Wood, M. D., LL. D. Physicians' Leisure Library Series. Detroit: Geo. L. Davis. Cloth, 50 cents; paper, 26 cents.

Prolapse of the Womb with especial Reference to the (so-called) Hypertrophic Elongation of the Supra-vaginal portion of the Cervix, with Report of a Case. By Lewis H. Adler, Jr., M. D. [Reprinted from the *Medical News*.]

A few Observations on the Etiology Prognosis and Cure of Incipient Cataract without Operative Interference. By A. R. Baker, M. D. [Reprinted from the Transactions of the Ohio State Medical Society.]

The President's Annual Address. By Robert Battey, M. D. [Reprinted from vol. xiii, Gynecological Transactions.

Dress Reform and its Relation to Medicine. By S. Knopf, M. D. [Reprinted from the *Southern California Practitioner*.]

Notes in Some Forms of Purpura Rheumatica. By William A. Edwards, M. D. [Reprinted from the *Universtty Medical Magazine*.]

Congestive Neurasthenia or Nerve Depression. By E. G. Whittle, M. D. The Art of Embalming. By Benjamin Ward Richardson, M. D. The Etiology, Diagnosis and Treatment of Tuberculosis. By Dr. H. Von Ziemssen, Phyco-Therapeutics or Treatment by Hypnotism. By Dr. C. Floyd Tuckey. Sexual Activity and the Critical Period in Man and Woman. By Dr. Louis de Séré. No. 3, vol. iii. Woods Medical and Surgical Monographs. New York: Wm. Wood & Co. Price, $1.00.

MEDICAL NEWS.

LICENTIATES OF THE BOARD OF EXAMINERS.

At the regular meeting of the Board of Examiners, held Sept. 10, 1889, the following physicians were granted certificates to practise medicine and surgery in this State:

R. D. Barber, South Riverside; Harvard Med. Coll., Mass., March 7,'66.
George W. Biggers, Lakeport; Beaumont Hosp. Med. Coll., Mo., March 28,'89.
Lucius H. Carter, Coulterville; McGill Univ., Montreal, Can., March 31,'88.
Wm. O. Fleming, San Diego; Coll. of Phys. and Surgs., Keokuk, Ia., Feb. 23,'71.
Elza A. Shaw Ingalls, San Francisco; Med. Dept. Univ. of Michigan, March 24,'75.
C. B. Jones, Los Angeles; Miami Med. Coll., Ohio, Feb. 28,'73.
Jeremiah Maher, Oakland; Rush Med. Coll., Ill., Feb. 21,'82.
John M. McFarland, Downey; Med. Dept. Univ. of Louisiana, March 19,'70.
Eliza F. Petrie, San Diego; Woman's Med. Coll., Penn., March 11,'69.
John H. E. Powell, Downey; School of Med. Univ. of Maryland, March 1,'79.
Edward M. Price, San Jose; Royal Coll. of Surgs., London, Eng., Jan. 27,'79; Royal Coll. of Phys., London, Eng., July 31,'79; Univ. of Brussels, Belgium, May 1,'84.
Edmund L. Pruett, Los Angeles; Coll. of Med. Univ. of Southern Cal., April 12,'89.

CHAS. E. BLAKE, Secretary.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the U. S. Army (Division of the Pacific), from August 17th, 1889, to September 16th, 1889.

Leave of absence for fifteen days is granted First Lieutenant W. B. Banister, Assistant Surgeon. Par. 2, S. O. 82, Dept. of Arizona, August 23, 1889.

Leave of absence for two months, on surgeon's certificate of disability, is hereby granted Major P. J. A. Cleary, Surgeon, U. S. A. S. O. 59, Div. Pacific, August 27, 1889.

The leave of absence granted Major John H. Janeway, Surgeon, in S. O. 52, July 29, 1889, Div. of the Pacific, is extended two months. Par. 1, S. O. 206, A. G. O., September 5, 1889.

First Lieutenant Leonard Wood, Assistant Surgeon, is relieved from duty at the Camp of Instruction, near Santa Cruz, Cal., and will return to his station, Presidio of San Francisco, Cal. Par. 3, S. O. 80, Dept. of Cal., September 13, 1889.

First Lieutenant Leonard Wood, Assistant Surgeon, will proceed to Portland, Oregon, and Fort Townsend, Washington Territory, on public business; and, on completion thereof, will return to his proper stations. Par. 2, S. O. 64, Div. Pacific, September 14, 1889.

Official List of Changes in the Medical Corps, U.S. Navy (Pacific Station), from August 20th to September 20th, 1889.

Charles H. White, Medical Inspector, from waiting orders to U. S. S "Pensacola," fitting out at Norfolk, Virginia, as flagship of the Pacific squadron.

P. A. Surgeon T. B. Baldwin, from U. S. S. "Ranger."

Surgeon H. P. Harvey, to U. S. S. "Ranger."

P. A. Surgeon E. H. Marsteller, from U. S. S. "Adams," and to hospital, Honolulu, H. I., with pneumonia.

Surgeon E. Z. Derr, from U. S. S. "Nipsic," and to U. S. S. "Adams."

ITEMS.

Suicide of Prof. Loreta.—The *Medical Age* states that Prof. Loreta, whose name has been connected with several new surgical operations, committed suicide by cutting his throat with a razor, in the latter part of July.

An Army Medical Board will be convened in New York City October 1, 1889, for the examination of such persons as may be properly invited to present themselves before it as candidates for appointment in the Medical Corps of the Army. There are at present nine vacancies in the Medical Corps of the U. S. Army in the grade of Assistant Surgeon. Information regarding the examinations and their natnre, etc., may be obtained by addressing the Surgeon General, U. S. Army, Washington, D. C.

Surgeon-General J. Mills Browne, U. S. N., who has been inspecting the Naval Medical Establishment on this coast, returned to Washington the latter part of September. He was stationed at Mare Island for many years; built the Naval Hospital, and enjoyed a large private practice in Vallejo. He is one of the highest Masons in the United States, and for three successive years was Grand Master of California. Surgeon-General Browne was medical officer of the Kearsarge when she fought the Alabama, and has contributed an account of the battle to the *Century* "War Papers."

American Public Health Association.—The sessions of the seventeenth annual meeting will be held in the Hall of the Brooklyn Institute, Washington and Concord streets. Addresses of welcome will be delivered by the Hon. Alfred C. Chapin, Mayor, on behalf of the city, and by Alexander Hutchins, M. D., on behalf of the medical profession. The following topics have been selected for consideration at the meeting: The Causes and Prevention of Infant Mortality; Railway Sanitation; Steamship Sanitation; Methods of Scientific Cooking; Yellow Fever; The Prevention and Restriction of Tuberculosis in Man; Methods of Prevention of Diphtheria, with results of such Methods; How far should Health Authorities be permitted to apply known Preventive Measures for the Control of Diphtheria; Compulsory Vaccination; Sanitation of Asylums, Prisons, Jails, and other Eleemosynary Institutions. An exhibition of sanitary goods and appliances will be held in the hall at the northwest corner of Fulton and Pineapple streets, and will be open to the public (free) from October 22d to December 1st. The exhibits will be classified under the following heads: The dwelling; schools and education; factories and workshops; clothing and dress; food; sanitary engineering; public health administration in cities and towns; the laboratory; red cross section. Dr. J. H. Raymond, 173 Joralemon street, Brooklyn, N. Y., is the Chairman of the Executive Committee.